

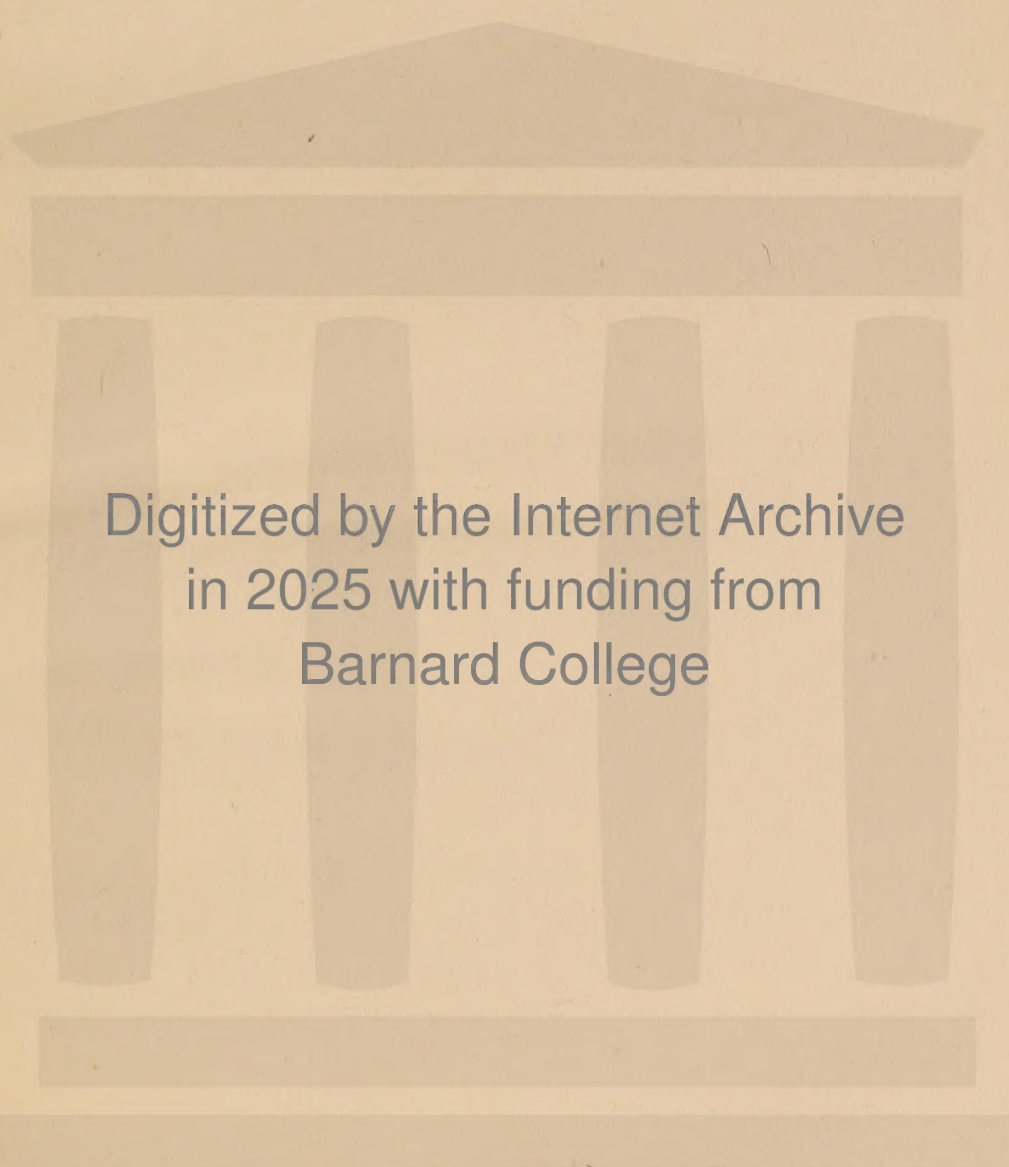


Columbia University
Bulletin of Information

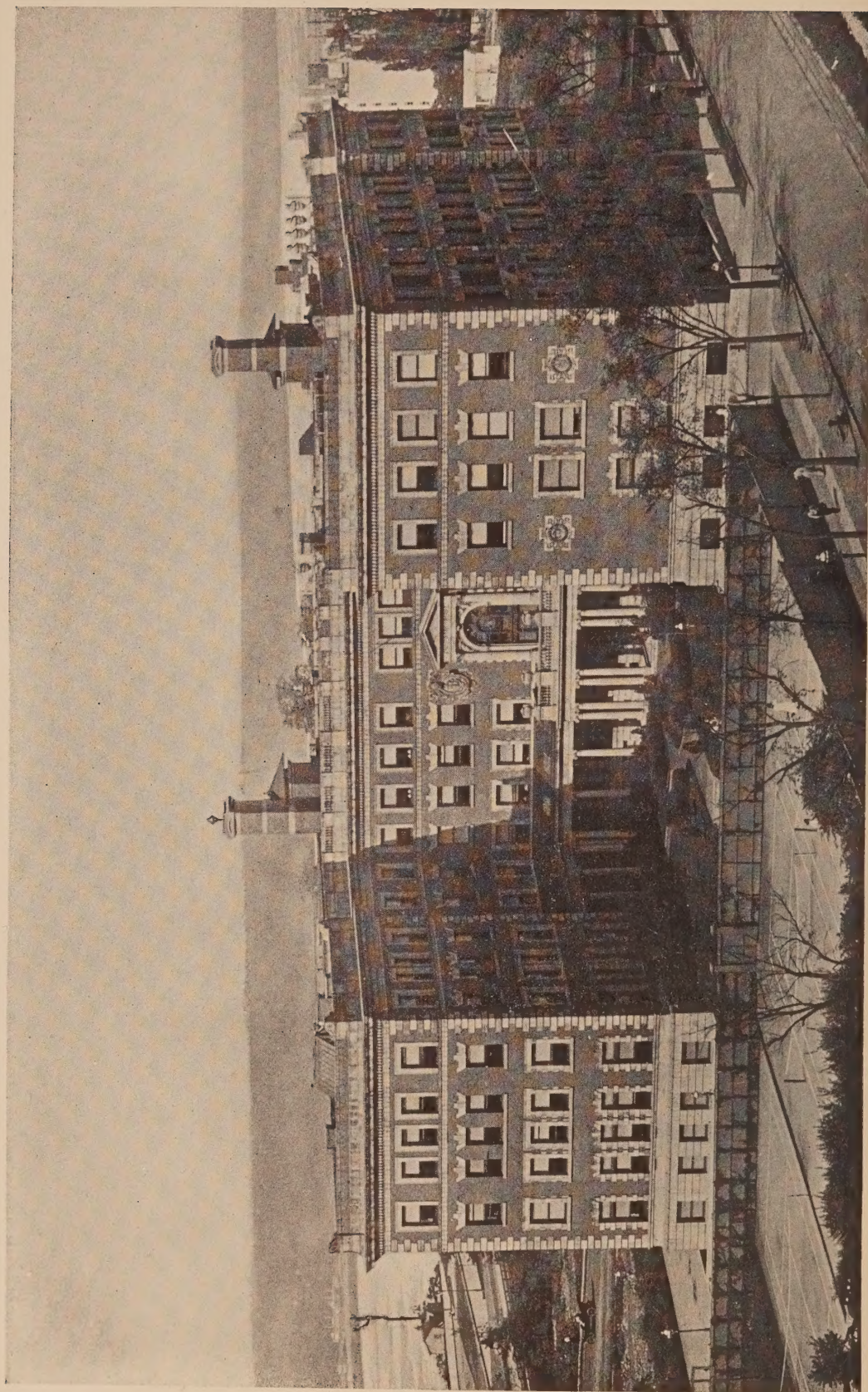
BARNARD COLLEGE

ANNOUNCEMENT

1909-1910



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Columbia University
Bulletin of Information

BARNARD COLLEGE

ANNOUNCEMENT

1909-1910

May, 1909

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1909

NOTE.—The date after each name indicates the expiration of term of office.

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[Any donor of not less than \$5000 will be enrolled among the founders
of Barnard College.]

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GEORGE WILLIS BOTSFORD, Ph.D., *Adjunct Professor of History*

² EDWARD KASNER, Ph.D., *Adjunct Professor of Mathematics*

CURTIS HIDDEN PAGE, Ph.D., *Professor of the Romance Languages and
 Literatures*

¹ Absent on leave, first half-year.

² Absent on leave, 1909-10.

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 GRACE A. HUBBARD, A.M., *Adjunct Professor of English*
 MARY KINGSBURY SIMKHOVITCH, A.B., *Adjunct Professor of Social
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 WILHELM ALFRED BRAUN, Ph.D., *Instructor in the Germanic Languages and Literatures*
 TRACY ELLIOT HAZEN, Ph.D., *Instructor in Botany*
 RAYMOND C. OSBURN, Ph.D., *Instructor in Zoölogy*
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JULIET STUART POINTS, A.B., *Assistant in History*
EDNA REBECCA SCALES, *Assistant in Mathematics*

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COMMITTEE ON ADMISSIONS: Professors COLE, *chairman*, WEEKS, and Dr. BRAUN

COMMITTEE ON SCHOLARSHIPS: The DEAN, *chairman*, Professor HUBBARD and Dr. HIRST

COMMITTEE ON HONORS: Professors TRENT, *chairman*, MALTBY, and KASNER

COMMITTEE ON STUDENT ORGANIZATIONS: Professors REIMER, *chairman*, PAGE and WEEKS

Officers of Administration

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ANNA E. H. MEYER, A.B., *Secretary*
VIRGINIA TUCKER BOYD, A.B., *Clerk*
MABEL FOOTE WEEKS, A.B., *Mistress of Brooks Hall*
FREDERICK A. GOETZE, M.Sc., *Consulting Engineer*
BERTHA L. ROCKWELL, *Librarian of Barnard College*

THE RELATION OF BARNARD COLLEGE TO COLUMBIA UNIVERSITY

According to the agreement made January 19, 1900, between the Trustees of Columbia College in the City of New York and Barnard College, for the purpose of incorporating Barnard College, a college for women, in the educational system of the University, it is provided:

That the President of the University shall be, *ex-officio*, President of Barnard College and a Trustee of Barnard College. He shall preside at the meetings of the Faculty of Barnard College and shall have general supervision and direction of the educational administration of such College as in the other schools of the University.

That the internal administration of Barnard College shall be conducted by a Dean, who shall be appointed by the President of the University, by and with the advice and consent of the Trustees of Barnard College. In the absence of the Dean, an Acting Dean may be appointed by the President.

That Barnard College shall be represented in the University Council of Columbia University by its Dean, who shall have the right to vote in the University Council upon all questions. The Faculty of Barnard College shall consist of the President, the Dean, and all the professors on the staff of the University who give instruction in Barnard College.

That Barnard College shall provide for and maintain such officers of instruction as may, from time to time, be agreed on. Such officers shall be nominated by the Dean of Barnard College, with the approval of the Trustees of Barnard College and of the President of the University, and shall be appointed and reappointed by the University according to its custom. Their standing shall be the same in all respects as that of other like officers in the University. For all services rendered in the University by officers so appointed an equivalent amount of service shall be rendered in Barnard College by other officers of the University of like grade, as may be determined from time to time, with the consent of the officers concerned, by the Dean of the College and the President of the University.

That members of the Faculty of Barnard College may be either men or women.

That on and after July 1, 1904, all of the undergraduate instruction for women shall be given separately in Barnard College. Barnard College will assume as rapidly as possible all of the instruction for

women in the senior year, without regard to the time limit contained in this section, and undertakes to maintain every professorship established at its instance, so long as the services of the incumbent thereof or an equivalent therefor shall be rendered in Barnard College; and when Barnard College has adequately provided for its undergraduate work, it will, as its means allow, establish additional professorships in the University, upon foundations, providing for courses which shall be open to men and women, to the end that opportunities for higher education may be enlarged for both men and women.

That the University will accept women who have taken their first degree on the same terms as men, as students of the University, and as candidates for the degrees of Master of Arts and Doctor of Philosophy under the Faculties of Philosophy, Political Science, and Pure Science, in such courses as have been or may be designated by these Faculties, with the consent of those delivering the courses, and will make suitable provision for the oversight of such women.

That the University will confer the degree of Bachelor of Arts or Bachelor of Science upon any student of Barnard College who shall have satisfactorily fulfilled in Barnard College the requirements of the University Statutes for that degree. The courses in Barnard College leading to the degree of Bachelor of Arts or Bachelor of Science shall be determined and administered by its own Faculty, and all examinations for admission to Barnard College and in course shall be conducted under the authority of the Faculty of Barnard College. The diploma shall be signed by the President of the University and by the Dean of Barnard College. The degrees conferred upon the graduates of Barnard College shall be maintained at all times as of equal value with the corresponding degrees conferred upon the graduates of Columbia College. The equivalency of the two degrees shall be maintained in such manner as the University Council may prescribe.

That, so long as this agreement is in force, Barnard College shall grant no degrees. It shall retain the right to grant certificates to students not candidates for a degree, and it shall exercise all other corporate rights and powers which are not delegated to the University by this agreement. But this agreement shall not be deemed a surrender by Barnard College of any powers conferred upon it by charter.

That Barnard College shall retain its separate corporate organization, and that the Trustees of Barnard College shall continue to provide for the financial support thereof.

That the library of the University shall be open to all women students of the University and of Barnard College upon the same terms as to men.

The provision made at Teachers College for students of Barnard College that wish to avail themselves of the advantage of professional training is explained in detail on page 50.

Teachers
College

Barnard College

GENERAL STATEMENT

Barnard College offers two distinct liberal courses of undergraduate instruction for women, each of four-years' duration, but differing widely in aim and leading to different degrees.

Courses of Study

The literary course requires the study of Latin for entrance and also in college, embraces such general subjects as are deemed essential to a liberal education, requires a major subject equivalent to a three-hour course throughout three years, and leads to the degree of Bachelor of Arts.

The science course allows the substitution of scientific and advanced subjects in place of the entrance Latin, embraces such general courses as are considered essential to any liberal education, requires a major and two minor subjects in pure science amounting to seventy points of college work, and leads to the degree of Bachelor of Science.

A general two-years' course, not leading to a degree, is arranged to give the cultural basis in literature, languages, history, and natural science for work in certain professional schools of the University.

The University requires of all students attendance upon all stated academic exercises. Students who find that stated academic exercises are fixed for days set apart for religious observance by the church to which they belong, and who are prevented by conscientious scruples from performing their University duties on those days, are requested to make application to the appropriate University authority for equitable relief. It should be noted, however, that in case alternative opportunities for taking a given examination are statedly offered, as for instance the January, June, and September entrance examinations, such students are expected to present themselves on the day which is not set apart as a holy day. In other cases, candidates for admission should make application to the Chairman of the Committee on Admissions of Barnard College, and students already matriculated should apply to the Committee on Instruction.

Academic Discipline

Under the statutes all students are admitted subject to the disciplinary power of the University.

ADMISSION

Candidates are admitted by the Committee on Admissions under the following general regulations.

Except for reasons of weight, candidates for admission to the freshman class must be at least fifteen years of age at the time of matriculation and correspondingly older for admission to advanced standing. Every candidate must, before admission, present a certificate of good moral character from her last teacher, or from some properly qualified citizen. Students from other colleges or universities must bring certificates of honorable dismissal.

All requests for information regarding admission should be addressed to the Secretary of the College.

ADMISSION TO THE FRESHMAN CLASS

Every candidate must offer subjects amounting to fifteen (15) "units." The unit here represents the number of years, at the rate of five (5) periods a week, which will normally be required in the secondary school to prepare adequately for the college examination.

The candidate *must* offer:

	COUNTING IN UNITS
English (page 28).....	3
Elementary Mathematics (page 37).....	3
and in case of a candidate for the A.B. degree:	
Elementary Latin (page 36).....	4
or in case of a candidate for the B.S. degree:	
Science.....	2
Advanced or Intermediate subjects.....	2
or in case of a candidate for the general two-years' course:	
Ancient or Modern Foreign Languages....	4
History, Foreign Languages, Mathematics, or Science.....	5

The candidate may offer any of the following subjects without other restriction than that to offer an advanced subject will involve offering, either at the same time or earlier, the corresponding elementary subject:

	COUNTING IN UNITS
Elementary Greek (page 34).....	3
Elementary History (see note, p. 35).....	2 or 1
Drawing (page 27).....	1
Music (page 38).....	1
Intermediate French (page 31).....	1
Intermediate German (page 33).....	1
1 Advanced English (page 30).....	1
1 Advanced Greek (page 34).....	1

¹ Candidates will be examined in this subject only in January and September.

	COUNTING IN UNITS
¹ Advanced History (page 35)	1
¹ Advanced Latin (page 37)	1
Advanced Mathematics (page 38)	1
and in the case of candidates for the B.S. de- gree or for the general two years' course:	
Elementary Latin (see note p. 36)	2
The candidate may offer not more than four (4) units in all from the four subjects following:	

	COUNTING IN UNITS
Elementary French (page 31)	2
Elementary German (page 32)	2
¹ Elementary Italian (page 36)	2
Elementary Spanish (page 40)	2

A candidate for the A.B. degree may offer not more than two (2) units and a candidate for the B.S. degree must offer not less than two (2) units in all from the five subjects following:

	COUNTING IN UNITS
Botany (page 26)	1
Chemistry (page 26)	1
Elementary Physics (page 40)	1
Physiography (page 40)	1
Zoölogy (page 41)	1

ENTRANCE EXAMINATIONS

Examinations for admission to Barnard College are held each year in January, June, and September. In 1909 they will be held June 14-19 and September 13-20, and in 1910, January 10-17.

The regulations covering candidates who are prevented by religious scruples from presence at any given series of examinations may be found in the paragraph relating to Attendance on page 16.

In June, 1909, the entrance examinations will be conducted by the College Entrance Examination Board, of which Columbia University is a member, at Barnard College and at a large number of widely distributed points. A list of these points will be published by the Board (Post-Office Sub-Station 84, New York, N. Y.) about March 1. Requests for examinations at particular points should reach the Secretary of the Board not later than February 1.

In September, 1909, and January, 1910, the entrance examinations of Barnard College, conducted by the Columbia University Committee on Entrance Examinations, will be held only at the College.

¹ Candidates will be examined in this subject only in January and September.

Every candidate for examination is required to file an application in advance. For the examinations in June, 1909, the application must be filed with the Secretary of the College Entrance Examination Board, Post-Office Sub-Station 84, New York, N. Y. **Application for Examination** Applications for examination in the United States east of the Mississippi River (also at Minneapolis, St. Louis, and other points on the Mississippi River), must be filed on or before May 31. Applications for examination elsewhere in the United States or in Canada must be filed on or before May 24; and applications for examination at points outside of the United States and Canada must be filed on or before May 10. Requests for blank forms of application should be addressed to the Secretary of the Board.

A candidate for a competitive scholarship to be awarded on the basis of the June examinations must, in her application to the Secretary of the College Entrance Examination Board, mention the scholarship for which she is competing; in which case her answer books, after having been rated by the Board will be transmitted to the Committee on Admissions of Barnard College.

For the examinations in September, 1909, and January, 1910, applications must be filed with the Registrar of Barnard College on or before September 4, and January 3, respectively. Requests for blank forms of application should be addressed to the Registrar of Barnard College.

Every application for examination in June must be accompanied by a fee of \$5 in the form of a postal order, express order, or draft on New York, to the order of the *College Entrance Examination Board*, for all candidates examined at points in the United States and Canada, and \$15 for all candidates examined at points outside of the United States and Canada. **Examination Fee**

Every application for examination in September or in January must be accompanied either by a fee of \$5 in the form of a postal order, express order, or draft on New York, to the order of *Barnard College*, by a receipt from the Bursar of Barnard College for an examination fee previously paid, or by the receipt issued by the Secretary of the College Entrance Examinations Board for the June examinations immediately preceding. *The latter will be accepted in either September or January but not in both; and a single fee paid to the University will cover only two consecutive series of examinations, namely January and September, or September and January.*

If a late application is accepted either by the College Entrance Examination Board, or by the College, a second fee of \$5 must be paid.

The receipt for the examination fee must be carefully preserved by the candidate and shown (not surrendered) to the Supervisor in charge of the examinations as evidence of her right to be admitted to the same. No candidate will be admitted to the September or January examinations upon the receipt of the College Entrance Examination

Board, unless that receipt bears the certification of the Registrar of Barnard College that the candidate's application for the examinations has been filed.

A candidate may present herself at any of the scheduled series of examinations subject to the following restrictions:

Division of (1) She may not present herself at more than four series **Examination** of examinations except by special consent of the Committee on Admissions of Barnard College.

(2) At the first and second series credit will be given only for such subjects or lettered (or numbered) parts of a subject, as are approved by her principal instructor.

(3) The results of an examination shall stand to her credit for twenty-nine months, but no longer.

Candidates taking the examinations must report to the Supervisor, **Schedule of** in the examination room, fifteen minutes in advance of **Examinations** the first examination which they are to attend.

June 14-19, 1909

Monday, June 14

Mathematics <i>a</i> , <i>i</i> , <i>ii</i> (elementary algebra: to quadratics; quadratics, and beyond).....	9.30-12.30
History <i>b</i> (mediæval and modern history).....	1.30- 3.30
History <i>d</i> (American history).....	1.30- 3.30
Physics (elementary).....	3.45- 5.45
Botany.....	3.45- 5.45
Zoölogy.....	3.45- 5.45

Tuesday, June 15

Mathematics <i>c</i> , <i>d</i> (plane geometry; solid geometry).....	9-12
History <i>a</i> (ancient history).....	1.30-3.30
History <i>c</i> (English history).....	1.30-3.30
German <i>a</i> (elementary German).....	3.45-5.45

Wednesday, June 16

Latin <i>m</i> (elementary sight translation of prose).....	10.45-12.30
French <i>a</i> (elementary French).....	1.30- 3.30
German <i>b</i> (intermediate German).....	3.45- 5.45
Spanish.....	3.45- 5.45

Thursday, June 17

Latin <i>c</i> (Cicero).....	9-11
Latin <i>a</i> (grammar and elementary prose composition) ..	11.15-12.30
Latin <i>d</i> (Virgil's <i>Æneid</i> , Books I-VI).....	1.30-3.30
French <i>b</i> (intermediate French).....	3.45-5.45

EXAMINATIONS

21

Friday, June 18

English <i>a</i> (reading and practice).....	9-11
Latin <i>l</i> (prose composition).....	11.15-12.30
English <i>b</i> (study and practice).....	1.30-3.30
Chemistry.....	3.45-5.45
Physiography.....	3.45-5.45
Greek <i>c</i> (Homer's Iliad, Books I-III).....	3.45-5.45
Music <i>b</i> (harmony).....	3.45-5.45

Saturday, June 19

Greek <i>b</i> (Xenophon).....	9-11
Drawing.....	9-11
Greek <i>a</i> (grammar and elementary prose composition)..	11.15-12.30
Mathematics <i>f</i> (plane trigonometry).....	1.30-3.30
Greek <i>g</i> (sight translation of prose).....	1.30-3.30
Greek <i>f</i> (prose composition).....	3.45-5.15
Music <i>a</i> (musical appreciation).....	3.45-5.45

September 13-20, 1909, and January 10-17, 1910

Monday, September 13, and January 10

Mathematics <i>a</i> , <i>i</i> , <i>ii</i> (elementary algebra: to quadratics; quadratics and beyond).....	9.30-12.30
History <i>b</i> (mediæval and modern history).....	1.30- 3.30
History <i>d</i> (American history).....	1.30- 3.30
Physics (elementary).....	3.45- 5.45
Botany.....	3.45- 5.45
Zoölogy.....	3.45- 5.45

Tuesday, September 14, and January 11

Mathematics <i>c</i> , <i>d</i> (plane geometry; solid geometry).....	9-12
History <i>a</i> (ancient history).....	1.30-3.30
History <i>c</i> (English history).....	1.30-3.30
German <i>a</i> (elementary German).....	3.45-5.45

Wednesday, September 15, and January 12

Latin <i>m</i> (elementary sight translation of prose).....	10.45-12.30
French <i>a</i> (elementary French).....	1.30- 3.30
German <i>b</i> (intermediate German).....	3.45- 5.45
Spanish.....	3.45- 5.45
Italian.....	3.45- 5.45

Thursday, September 16, and January 13

Latin <i>c</i> (Cicero).....	9-11
Latin <i>a</i> (grammar and elementary prose composition)..	11.15-12.30
Latin <i>d</i> (Virgil's Æneid, Books I-VI).....	1.30- 3.30
French <i>b</i> (intermediate French).....	3.45- 5.45

Friday, September 17, and January 14

English <i>a</i> (reading and practice).....	9-11
Latin <i>l</i> (prose composition).....	11.15-12.30
English <i>b</i> (study and practice).....	1.30- 3.30
Chemistry.....	3.45- 5.45
Physiography.....	3.45- 5.45
Greek <i>c</i> (Homer's <i>Iliad</i> , Books I-III).....	3.45- 5.45
Music <i>b</i> (harmony).....	3.45- 5.45

Saturday, September 18, and January 15

Greek <i>b</i> (Xenophon).....	9-11
Drawing.....	9-11.30
Greek <i>a</i> (grammar and elementary prose composition)..	11.15-12.30
Advanced history.....	1.30- 3.30
Mathematics <i>f</i> (plane trigonometry).....	1.30- 3.30
Greek <i>g</i> (sight translation of prose).....	1.30- 3.30
Greek <i>f</i> (prose composition).....	3.45- 5.45
Music <i>a</i> (musical appreciation).....	3.45- 5.45

Monday, September 20, and January 17

Advanced English.....	9-12
Advanced Greek.....	9-12
Advanced Latin.....	1-4

Barnard College accepts in lieu of its entrance examinations, no credentials of any sort except certificates from the College Entrance Examination Board,¹ the College Entrance Diploma of the Education Department of the State of New York,² and the certificates of en-

¹ The numerical ratings of the Board are accepted by the College, but the passing mark is fixed by the Committee on Admissions of Barnard College.

² Candidates offering the College Entrance Diploma of the Education Department of the State of New York should observe the following regulations:

In Advanced History or Advanced Algebra neither of the three-count electives is accepted.

In Drawing, if this subject is offered, the diploma must cover both Drawing (three counts) and Advanced Drawing (three counts), and must be accompanied by a set of at least twenty free-hand drawings duly certified by the teacher.

In the natural sciences,—physics, chemistry, physiography, advanced botany, and advanced zoölogy,—a note-book, duly certified by the teacher must be presented with the diploma.

For admission to the A.B. course at Barnard College the Diploma of the Arts Department is required. It must cover: in Latin, (advanced) Prose Composition and Prose Translation at Sight (Cæsar is not accepted as satisfying any part of the requirement); in Greek, if this subject is offered as the second foreign language, five elective counts (3d year), including, beside Xenophon and Homer, (advanced) Prose Composition and Prose Translation at Sight.

For admission to the B.S. course at Barnard College the Diploma of the Science Department is necessary. It must cover a second science—preferably chemistry,—and either (1) three years of both French and German or (2) three years of either French

trance examinations taken in good faith for admission to other colleges. *Such certificates are accepted only in so far as they cover specifically, and by name, subjects or lettered (or numbered) parts of a subject which are accepted for admission to Barnard College.* Except for reasons of weight such certificates are not accepted as covering subjects passed more than twenty-nine months previous to the date at which the candidate intends to begin residence. No certificates from preparatory schools or from preparatory departments of colleges will be accepted in lieu of entrance examinations. Candidates must take the regular entrance examinations in the subjects in which their certificates are not deemed adequate.

**Certificates
in Lieu of
Entrance
Examinations**

All certificates so offered must be in the hands of the Barnard College Committee on Admissions at least two weeks before the first day of the entrance examinations.

A grade of C in the following courses of the Summer Session of Columbia University will fulfil entrance requirements or remove entrance conditions in the subjects specified in each case:

**Summer
Session Work
in Lieu of
Entrance
Examinations**

Chemistry sA—for chemistry
French sA₁ with sA₂—for elementary French
French sB₁ with sB₂—for intermediate French
German sA₁, sA₂, sA₃—for elementary German
German sB—for intermediate German
Italian s₁ with s₂—for elementary Italian
Mathematics sA₁, sA₂, sA₃—for advanced mathematics
Physics sA—for physics
Spanish s₁ with s₂—for elementary Spanish

A student may be admitted to the freshman class on probation when the total number of units received by her in the entrance examinations amounts to eleven (11) out of the total required fifteen (15) units; but general deficiency in any one of the prescribed subjects will be regarded as disqualifying a candidate for admission.

**Entrance
Conditions**

A student admitted conditionally or by certificate will be held under probation during the first half-year of residence. By Tuesday of the week preceding the Christmas holidays, each department in which students on probation attend will make to the Committee on Instruction a special report of progress in the case of every such student. The Dean, on the recommendation of the Committee on Instruction, will as soon as practicable after the mid-year examinations decide as to each student on probation whether

Probation

or German and solid Geometry and Trigonometry (five counts). In the latter case, Latin (two years), if it includes Cicero or Virgil, may be offered as the second foreign language.

For admission to the general two-years course either the Arts or the Science Diploma may be presented, provided Drawing is not included among the electives and Cæsar is not offered to satisfy any part of the Latin requirement.

she shall be admitted to full standing, have her period of probation extended, or be dropped from the roll.

The mark C, B, or A, obtained at the end of the first half-year of residence, in a course of a higher grade than the entrance requirement, will be regarded as removing an entrance condition in that subject, unless the condition was incurred in a part of the subject not directly involved in the work of the college course. To remove a condition by college work, a mark of at least thirty per cent. must have been obtained in an entrance examination. Any condition not so removed must be satisfied by formal examination. (Regarding the removal of entrance conditions by work in the Summer Session of Columbia University, see page 23.)

No student with unremoved entrance conditions may be admitted to the sophomore class.

ADMISSION TO ADVANCED STANDING

A candidate for admission to advanced standing, either upon the basis of certificates from other colleges or on examination, must fill out the appropriate application blank to be obtained from the Registrar, and file it with the Chairman of the Barnard College Committee on Admissions at least one week before the first day of the September or January entrance examinations. Each candidate must also present at that time, (1) an official statement of her academic record including entrance credits, (2) letters from at least two of her instructors in regard to her scholarship and character, (3) an honorable dismissal from the college which she is leaving, and (4) a marked catalogue of that college plainly showing every requirement for admission and every course of instruction with which she is credited.

Every candidate for admission to advanced standing must show that she has attained proficiency in the equivalent of (1) the requirements for admission to the freshman class; (2) all the prescribed studies already pursued by the class to which she seeks admission; (3) as many elective studies as she would have pursued if she had entered the class at the beginning of the freshman year.

She may be admitted notwithstanding deficiencies in some of these studies, but will not be recommended for a degree until she shall have brought all her studies up to the point required for that degree.

The credits granted in any subject to a student admitted with advanced standing may be withdrawn or diminished in amount, if, in pursuing such subject after admission to Barnard College, the student prove that the granting of the credits was wholly or in part unwarranted by her previous work.

No applicant may enter the senior class as a candidate for a degree after October 15 in any year, and no student will receive a degree who has resided less than two full half-years at Barnard College. (See also paragraph 11, page 48.)

Candidates for admission to the freshman class offering for en-

trance more than the required 15 units may be given credit toward a degree for this extra work, on a basis to be determined by the Committee on Admissions, provided that not more than 18 of the 124 points required for a degree may be gained in this way.

ADMISSION AS SPECIAL STUDENTS

A candidate for admission as a special student must fill out the appropriate application blank to be obtained from the Registrar and file it with the Chairman of the Barnard College Committee on Admissions at least one week before the first day of the September or January entrance examinations.

Special students in Barnard College are of two classes: non-matriculated and matriculated.

Non-matriculated special students must be women of mature age who wish to pursue chiefly advanced courses of special study. They may be admitted at the discretion of the Committee on Admissions without passing formal entrance examinations; but they must furnish proof that they have at some time pursued the studies included in the matriculation examinations and must satisfy the requirements of the department that they desire to enter. *Candidates desiring to pursue merely elementary courses, as in languages, etc., will not be admitted as non-matriculated special students.*

Non-
Matriculated
Special
Students

No courses taken by non-matriculated special students can at any time be counted by them toward a degree.

Matriculated special students are women who wish, without taking a degree, to make a serious study of some subject or group of subjects. They must pass the regular examinations for admission to the freshman class and have full credit for fifteen (15) units of the entrance requirements. (See p. 17.) They may, therefore, in event of a change of plan, be credited with such of their courses as may coincide with the courses leading to a degree.

Matriculated
Special
Students

Except for reasons of weight, satisfactory to the Committee on Admissions, no one will be received as a special student who is less than eighteen years of age, or who has, within ten months of the time of her application, either been rejected or become deficient as a regular student.

Once admitted to the college, special students will be allowed to select their own courses of study subject to the general approval of the Dean, on the recommendation of the Committee on Instruction, and to the particular approval, for each course selected, of the head of the department in which the course is given.

Each student is required to pursue in each half-year courses amounting to at least eight (8) points, unless excused by the Dean, on the recommendation of the Committee on Instruction, for reasons of special weight.

In the courses which they severally pursue all special students will be held to the observance of the same regulations as to attendance, examination, proficiency, and deficiency as regular students.

All special students will receive a formal statement as to the satisfactory completion of the work that they have taken.

DEFINITIONS OF REQUIREMENTS¹

Specimens of the question papers set by Columbia University may be obtained from the Registrar upon application. The question papers of the College Entrance Examination Board are published annually in book form by Ginn & Company, Boston, Mass.

For a more detailed statement of the requirements in botany and physiography or lists of suitable laboratory experiments in chemistry and physics the reader is referred to the pamphlet of the College Entrance Examination Board containing definitions of the requirements in each subject.

BOTANY (counting one unit)

The candidate should have received training by means of the laboratory method in:

The structure and the more obvious features of the life history of at least ten types among the higher seed plants chosen from the more representative families (*e. g.*, Gramineæ, Liliaceæ, Salicaceæ, Ranunculaceæ, Rosaceæ, Leguminosæ, Cruciferae, Solanaceæ, Labiatae, Compositae). In addition to these the following types are recommended among the remaining lower groups of plants: pine, *Selaginella*, a fern, a moss (*Polytrichum* or *Funaria*), a leafy hepatic, *Marchantia*, a mildew (*Microsphaera*), an agaric, *Vaucheria*, *Spirogyra*, and a protophyte (preferably *Sphaerella*).

Physiology. This work should cover the essential facts concerning irritability, photosynthesis, respiration, digestion, growth, and reproduction.

Ecology. The natural history of plants should receive considerable attention, and the behavior of plants toward environmental factors (especially light and moisture), dissemination, cross and close pollination, and the more important structural and physiological characteristics of plant formations (hydrophytes, halophytes, mesophytes, and xerophytes) should be included.

As evidence of proper laboratory training and of satisfactory work, a note-book must be submitted. (See Submission of Note-books, page 43.)

CHEMISTRY (counting one unit)

The candidate's preparation in chemistry should include:

a. The study of a standard text-book, to the end that the pupil may gain a comprehensive and connected view of the most important facts and laws of elementary chemistry.

¹ The relative value of subjects is expressed in units according to the time for adequate preparation in them; a unit in the sense here used represents a course of five (5) periods weekly throughout an academic year of the preparatory school.

b. Instruction by lecture-table demonstrations, to be used mainly as a basis for questioning upon the general principles involved in the pupil's laboratory investigations.

c. Individual laboratory work, comprising at least forty exercises.

An indexed note-book of the experiments must be submitted. (See Submission of Note-books, page 43.)

The following outline includes only the indispensable things which must be studied in the class-room and laboratory. The material is, for the most part, common to all elementary text-books and laboratory manuals. The order of presentation will naturally be determined by each teacher for himself.

OUTLINE.—The chief physical and chemical characteristics, the preparation and the recognition of the following elements together with their principal compounds: *oxygen, hydrogen, carbon, nitrogen, chlorine, bromine, iodine, fluorine, sulphur*, phosphorus, silicon, potassium, *sodium*, calcium, magnesium, *zinc*, copper, mercury, silver, aluminum, *lead*, tin, *iron*, manganese, chromium.

More detailed study should be confined to the italicized *elements* (as such) and to a restricted list of compounds such as: water, hydrochloric acid, carbon-monoxide, carbon-dioxide, oxides of nitrogen, nitric acid, ammonia, sulphur-dioxide, sulphuric acid, hydrogen sulphide, sodium-hydroxide, ammonium-hydroxide.

Attention should be given to the atmosphere (constitution and relation to animal and vegetable life), flames, acids, bases, salts, oxidation and reduction, crystallization, combining proportions by weight and volume, calculations founded on these and Boyle's and Charles's laws, symbols and nomenclature, atomic theory, atomic weights, valency (in a very elementary way), nascent state, natural grouping of the elements, solution (solvents and solubility of gases and solids and liquids, saturation), strength of acids and bases, conservation and dissipation of energy, chemical energy, electrolysis. Chemical terms should be clearly understood, and the pupil should be able to illustrate and apply the ideas they embody. The theoretical topics are not intended to form separate subjects of study, but to be taught only so far as is necessary for the correlation and explanation of the experimental facts.

DRAWING (counting one unit)

The candidate's preparation in drawing should include simple geometrical, plane, and solid figures, simple pieces of machinery, the drawing of simple pieces of architectural ornament (a Greek anthemion, a design of iron scrollwork, etc.) the copying of machinery details, or the copying of still life and simple plant forms, with a fair knowledge of perspective and light and shade as applied in freehand sketching. The candidate should be able to reproduce from a flat copy with enlargement or reduction of size.

Every candidate must present at the time of and as part of the examination in drawing a set of freehand drawings executed during one year's course in a preparatory school and within a period of two years before the time of application for admission.

These drawings should be at least twenty in number and should display the proficiency of the student in the following points:

1. Ability to sketch freehand from dictation with reasonable accuracy and with fairly correct, steady, and clean lines any simple geometrical figure or combinations of figures, straight lines, squares and circles, polygons, spirals, or the like.

2. Ability to sketch from the object with reasonable correctness of proportion, structure, and form, geometrical models, simple vases, simple details of machinery or common objects such as ordinary household furniture and furniture utensils.

3. Ability to sketch from the copy, enlarging or reducing its dimensions, any simple object such as a globe valve, stop-cock, or any ordinary historical ornament such as an acanthus leaf, egg and dart ornament, anthemion, tile pattern, iron scrollwork, or the like.

Correctness of proportion and accuracy in the angles and curves and structural relations of the parts of every figure or object drawn are of the highest importance, and great care should be taken in laying out the drawings in the use of construction lines and in the drawing of general masses and contour before the details are begun.

A certain proportion of shade drawing from casts may be included, but they are not required and should not form the majority of the drawings submitted.

All drawings should be of uniform size, and fastened together, not rolled.

In case the candidate has not attended a systematic course of instruction as detailed above she may submit a corresponding set of freehand drawings. (See Submission of Note-books, page 43.)

ENGLISH

Elementary (counting three units)

No applicant will be accepted in English whose work is notably defective in point of spelling, grammar, idiom, punctuation, or division into paragraphs.

- a. Reading and Practice.—The form of examination will usually be the writing of a paragraph or two on each of several topics, to be chosen by the candidate from a considerable number—perhaps ten or fifteen—set before her in the examination paper. The treatment of these topics is designed to show the candidate's power of clear and accurate expression, and will call for only a general knowledge of the substance of the books. In every case knowledge of the book will be regarded as less important than the ability to write good English. In place of a part or the whole of this test, the candidate may present an exercise book, properly certified by her instructor, containing

compositions or other written work done in connection with the reading of the books, and prepared in accordance with a list of directions, to be obtained by addressing the Secretary of the University. (See Submission of Note-books, page 43.) In preparation for this part of the requirement, it is important that the candidate shall have been instructed in the fundamental principles of rhetoric.

Candidates intending to take this part of the examination should read the books prescribed for the year in which they propose to submit themselves for examination in this subject.

In 1909, 1910, and 1911 ten books *and in 1912 nine books* selected from the following list as prescribed below, are to be offered for examination:

Group I (two to be selected). Shakspeare's *As you Like It*, *Henry V*, *Julius Cæsar*, *The Merchant of Venice*, *Twelfth Night*.

Group II (one to be selected). Bacon's *Essays*; Bunyan's *The Pilgrim's Progress*, Part I; *The Sir Roger de Coverley Papers* in the *Spectator*; Franklin's *Autobiography*.

Group III (one to be selected). Chaucer's *Prologue*; Spencer's *Faerie Queen* (selections); Pope's *The Rape of the Lock*; Goldsmith's *The Deserted Village*; Palgrave's *Golden Treasury* (First Series), Books II and III, with especial attention to Dryden, Collins, Gray, Cowper, and Burns.

Group IV (two to be selected). Goldsmith's *The Vicar of Wakefield*; Scott's *Ivanhoe*; Scott's *Quentin Durward*; Hawthorne's *The House of the Seven Gables*; Thackeray's *Henry Esmond*; Mrs. Gaskell's *Cranford*; Dickens's *A Tale of Two Cities*; George Eliot's *Silas Marner*; Blackmore's *Lorna Doone*.

Group V (two, *but in 1912 one* to be selected). Irving's *Sketch-Book*; Lamb's *Essays of Elia*; DeQuincey's *Joan of Arc* and *The English Mail Coach*; Carlyle's *Heroes and Hero Worship*; Emerson's *Essays* (Selected); Ruskin's *Sesame and Lilies*.

Group VI (two to be selected). Coleridge's *The Ancient Mariner*; Scott's *The Lady of the Lake*; Byron's *Mazeppa* and *The Prisoner of Chillon*; Palgrave's *Golden Treasury* (First Series), Book IV, with especial attention to Wordsworth, Keats, and Shelley; Macaulay's *Lays of Ancient Rome*; Poe's *Poems*; Lowell's *The Vision of Sir Launfal*; Arnold's *Sohrab and Rustum*; Longfellow's *The Courtship of Miles Standish*; Tennyson's *Gareth and Lynette*, *Launcelot and Elaine*, and *The Passing of Arthur*, *but in 1912 Tennyson's The Princess is substituted*; Browning's *Cavalier Tunes*, *The Lost Leader*, *How They Brought the Good News from Ghent to Aix*, *Evelyn Hope*, *Home Thoughts from Abroad*, *Home Thoughts from the Sea*, *Incident of the French Camp*, *The Boy and the Angel*, *One Word More*, *Hervé Riel*, *Pheidippides*.

b. Study and Practice.—This part of the examination presupposes the thorough study of each of the works named below. The examination will be upon subject-matter, form, and structure. In addition, the

candidate may be required to answer questions involving the essentials of English grammar, and questions on the leading facts in those periods of English literary history to which the prescribed works belong.

In connection with the reading and study of the required books parallel or subsidiary reading should be encouraged, and a considerable amount of English poetry should be committed to memory. The essentials of English grammar should not be neglected in preparatory study.

The books prescribed for this part of the examination are as follows:

In 1909, 1910, and 1911: Shakspeare's *Macbeth*; Milton's *Lycidas*, *Comus*, *L'Allegro*, and *Il Penseroso*; Burke's *Speech on Conciliation with America*; or Washington's *Farewell Address* and Webster's *First Bunker Hill Oration*; Macaulay's *Life of Johnson*, or Carlyle's *Essay on Burns*.

In 1912: Shakspeare's *Macbeth*; Milton's *Comus*, *L'Allegro*, and *Il Penseroso*, or Tennyson's *Gareth and Lynette*, *Launcelot and Elaine*, and the *Passing of Arthur*; Burke's *Speech on Conciliation with America*, or Washington's *Farewell Address* and Webster's *First Bunker Hill Oration*; Macaulay's *Life of Johnson*, or Carlyle's *Essay on Burns*.

Advanced (counting one unit)

Candidates offering Advanced English will be required to have covered substantially the same ground as that included under English **A1-A2**, the course prescribed for freshmen. Candidates are examined in the following subjects:

1. English composition, with special attention to correctness of style and orderly arrangement of material. In preparation for this part of the examination, the student should gain a practical acquaintance with the principles of rhetoric as expounded in any good textbook.

2. English literature—the general history from the Anglo-Saxon period to the death of Tennyson, and selected works from the Elizabethan period to the present day. The selected works are: Marlowe's *Edward II*; Shakspeare's *Hamlet*; Milton's *Paradise Lost* (Books 1, 2, 3, and 6); Dryden's *Essay of Dramatic Poesy*; Swift's *The Battle of the Books*; Pope's *Iliad* (Books 1, 6, 22, and 24); Goldsmith's *She Stoops to Conquer*; Byron's *Childe Harold*; Webster's *Reply to Hayne*; Dickens's *Old Curiosity Shop*.

In examination the candidate will be expected to answer questions on the history of English literature and to write short essays based on topics relating to the works prescribed. In addition she must submit not less than ten essays of at least 500 words each. At least half but not all of these essays, should be on topics chosen from the books prescribed. (See Submission of Note-books, page 43).

FRENCH

a. Elementary (counting two units)

THE AIM OF THE INSTRUCTION.—At the end of the elementary course the pupil should be able to pronounce French accurately, to read at sight easy French prose, to put into French simple English sentences taken from the language of everyday life, or based upon a portion of the French text read, and to answer questions on the rudiments of the grammar, as defined below.

THE WORK TO BE DONE.—During the first year the work should comprise: (1) careful drill in pronunciation; (2) the rudiments of grammar, including the inflection of the regular and the more common irregular verbs, the plural of nouns, the inflection of adjectives, participles and pronouns; the use of personal pronouns, common adverbs, prepositions, and conjunctions; the order of words in the sentence, and the elementary rules of syntax; (3) abundant easy exercises, designed not only to fix in the memory the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression; (4) the reading of from 100 to 175 duodecimo pages of graduated texts, with constant practice in translating into French easy variations of the sentences read (the teacher giving the English), and in reproducing from memory sentences previously read; (5) writing French from dictation.

During the second year the work should comprise: (1) the reading of from 250 to 400 pages of easy modern prose in the form of stories, plays, or historical or biographical sketches; (2) constant practice, as in the previous year, in translating into French easy variations upon the texts read; (3) frequent abstracts, sometimes oral and sometimes written, of portions of the text already read; (4) writing French from dictation; (5) continued drill upon the rudiments of grammar, with constant application in the construction of sentences; (6) mastery of the forms and use of pronouns, pronominal adjectives, of all but the rare irregular verb forms, and of the simpler uses of the conditional and subjunctive.

Suitable texts for the second year are: About's *Le roi des montagnes*, Bruno's *Le tour de la France*, Daudet's easier short tales, La Bédoulière's *La Mère Michel et son chat*, Erckmann-Chatrian's stories, Foa's *Contes biographiques* and *Le petit Robinson de Paris*, Foncin's *Le pays de France*, Labiche and Martin's *La poudre aux yeux* and *Le voyage de M. Perrichon*, Legouv   and Labiche's *La cigale chez les fourmis*, Malot's *Sans famille*, Mair  t's *La t  che du petit Pierre*, M  rim  e's *Colomba*, extracts from Michelet, Sarcey's *Le si  ge de Paris*, Verne's stories.

b. Intermediate (counting one unit)

THE AIM OF THE INSTRUCTION.—At the end of the intermediate course the pupil should be able to read at sight ordinary French prose

or simple poetry, to translate into French a connected passage of English based on the text read, and to answer questions involving a more thorough knowledge of syntax than is expected in the elementary course.

THE WORK TO BE DONE.—This should comprise the reading of from 400 to 600 pages of French of ordinary difficulty, a portion to be in the dramatic form; constant practice in giving French paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; the study of a grammar of moderate completeness; writing from dictation.

Suitable texts are: About stories, Augier and Sandeau's *Le gendre de M. Poirier*, Béranger's poems, Corneille's *Le Cid* and *Horace*, Coppée's poems, Daudet's *La Belle-Nivernaise*, La Brète's *Mon oncle et mon curé*, Madame de Sévigné's letters, Hugo's *Hernani* and *La chute*, Labiche's plays, Loti's *Pêcheur d'Islande*, Mignet's historical writings, Molière's *L'avare* and *Le bourgeois gentilhomme*, Racine's *Athalie*, *Andromaque*, and *Esther*, George Sand's plays and stories, Sandeau's *Mademoiselle de la Seiglière*, Scribe's plays, Thierry's *Récits des temps mérovingiens*, Thiers's *L'expédition de Bonaparte en Egypte*, Vigny's *La canne de jonc*, Voltaire's historical writings.

GERMAN

a. Elementary (counting two units)

THE AIM OF THE INSTRUCTION.—At the end of the elementary course in German the pupil should be able to read at sight, and to translate if called upon, by way of proving her ability to read, a passage of very easy dialogue or narrative prose, help being given upon unusual words and constructions, to put into German short English sentences taken from the language of everyday life or based upon the text given for translation, and to answer questions upon the rudiments of grammar, as defined below.

THE WORK TO BE DONE.—During the first year the work should comprise: (1) careful drill upon pronunciation; (2) the memorizing and frequent repetition of easy colloquial sentences; (3) drill upon the rudiments of grammar—that is, upon the inflection of the articles, of such nouns as belong to the language of everyday life, of adjectives, pronouns, weak verbs, and the more usual strong verbs, also upon the use of the more common prepositions, the simpler uses of the modal auxiliaries, and the elementary rules of syntax and word-order; (4) abundant easy exercises designed not only to fix in mind the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression; (5) the reading of from 75 to 100 pages of graduated texts from a reader, with constant practice in translating into German easy variations upon sentences selected from the reading lesson (the teacher giving the English), and in the reproduction from memory of sentences previously read.

During the second year the work should comprise: (1) the reading of from 150 to 200 pages of literature in the form of easy stories and plays; (2) accompanying practice, as before, in the translation into German of easy variations upon the matter read, and also in the off-hand reproduction, sometimes orally and sometimes in writing, of the substance of short and easy selected passages; (3) continued drill upon the rudiments of the grammar, directed to the ends of enabling the pupil, first, to use her knowledge with facility in the formation of sentences, and, secondly, to state her knowledge correctly in the technical language of grammar.

Stories suitable for the elementary course can be selected from the following list: Andersen's *Märchen* and *Bilderbuch ohne Bilder*; Arnold's *Fritz auf Ferien*; Baumbach's *Die Nonna* and *Der Schwiegersohn*; Gerstäcker's *Germelshausen*; Heyse's *L'Arrabbiata*, *Das Mädchen von Treppi*, and *Anfang und Ende*; Hillern's *Höher als die Kirche*; Jensen's *Die braune Erica*; Leander's *Träumereien* and *Kleine Geschichten*; Seidel's *Märchen*; Stökl's *Unter dem Christbaum*; Storm's *Immensee* and *Geschichten aus der Tonne*; Zschokke's *Der zerbrochene Krug*.

Among the shorter plays the best available are perhaps Benedix's *Der Prozess*, *Der Weiberfeind*, and *Günstige Vorseichen*; Elz's *Er ist nicht eifersüchtig*; Wichert's *An der Majorsecke*; Wilhelmi's *Einer muss heiraten*. It is recommended, however, that not more than one of these plays be read. The narrative style should predominate. A good selection of reading matter for the second year would be Andersen's *Märchen*, or *Bilderbuch*, or Leander's *Träumereien*, to the extent of, say, forty pages. After that such a story as *Das kalte Herz*, or *Der zerbrochene Krug*; then *Höher als die Kirche*, or *Immensee*; next a good story by Heyse, Baumbach, or Seidel; lastly *Der Prozess*.

b. Intermediate (counting one unit)

THE AIM OF THE INSTRUCTION.—At the end of the intermediate course the pupil should be able to read at sight German prose of ordinary difficulty, whether recent or classical; to put into German a connected passage of simple English, paraphrased from a given text in German; to answer any grammatical questions relating to usual forms and essential principles of the language, including syntax and word-formation; and to translate and explain (so far as explanation may be necessary) a passage of classical literature taken from some text previously studied.

THE WORK TO BE DONE.—The work should comprise, in addition to the elementary course, the reading of about 400 pages of moderately difficult prose and poetry, with constant practice in giving, sometimes orally and sometimes in writing, paraphrases, abstracts, or reproductions from memory of selected portions of the matter read, also grammatical drill upon the less usual strong verbs, the use of articles, cases, auxiliaries of all kinds, tenses and modes (with special reference

to the infinitive and subjunctive), and likewise upon word-order and word-formation.

The intermediate course is supposed to be the elementary course, plus one year's work at the rate of not less than four recitations a week. Suitable reading matter for the third year can be selected from such works as the following: Ebner-Eschenbach's *Die Freiherren von Gemperlein*; Freytag's *Die Journalisten* and *Bilder aus der deutschen Vergangenheit*—for example, *Karl der Grosse*, *Aus den Kreuzzügen*, *Doktor Luther*, *Aus dem Staat Friedrichs des Grossen*; Fouqué's *Undine*; Gerstäcker's *Irrefahrten*; Goethe's *Herrmann und Dorothea* and *Iphigenie*; Heine's poems and *Reisebilder*; Hoffmann's *Historische Erzählungen*; Lessing's *Minna von Barnhelm*; Meyer's *Gustav Adolfs Page*; Moser's *Der Bibliothekar*; Riehl's *Novellen*—for example, *Burg Neideck*, *Der Fluch der Schönheit*, *Der stumme Ratsherr*, *Das Spielmannskind*; Rosegger's *Waldheimat*; Schiller's *Der Neffe als Onkel*, *Der Geisterseher*, *Wilhelm Tell*, *Die Jungfrau von Orleans*, *Das Lied von der Glocke*, *Balladen*; Scheffel's *Der Trompeter von Säckingen*; Uhland's poems; Wildenbruch's *Das elde Blut*.

GREEK

Elementary (counting three units)

a. i. Grammar. The common forms, idioms, and constructions, and the general grammatical principles of Attic Greek prose.

ii. Elementary Prose Composition. Translation into Greek of detached sentences to test the candidate's knowledge of grammatical constructions.

The examination in the two subjects immediately preceding will be based on the first two books of Xenophon's *Anabasis*.

Greek a. i. and ii. is considered a single, indivisible subject.

b. Xenophon. The first four books of the *Anabasis*.

c. Homer. The first three books of the *Iliad* (omitting II, 494–end) and the constructions, poetical forms, and prosody of Homer's *Iliad*.

f. Prose Composition. Translation into Greek of continuous prose based on Xenophon and other Attic prose of similar difficulty.

g. Sight Translation of Prose. Translation into English at sight based on prose of no greater difficulty than Xenophon's *Anabasis*.

Advanced (counting one unit)

Candidates offering Advanced Greek will be required to have covered substantially the same ground as that included under Greek 11–12 with 3–4 or 5–6. In Homer, for which no equivalent will ordinarily be accepted, the minimum requirement will be 1200 lines in addition to the amount offered for the elementary examination. The candidate must also offer Herodotus, Book VI, and Plato's *Apology*, and in prose composition at least fifteen exercises in Spieker's *Greek Prose Composition*.

If candidates wish to offer equivalents for any of the subjects

named, they must designate them when they apply for examination in this subject.

HISTORY

Elementary (counting one or two units)

NOTE.—Each of the four divisions, *a*, *b*, *c*, and *d*, counts one (1) unit. Candidates may offer any one (1) or any two (2) of the divisions without restriction.

a. Ancient history, including a brief introductory study of the Oriental peoples, and early mediæval history to the death of Charlemagne, with due reference to art, literature, and government.

b. Mediæval and modern history, from the death of Charlemagne to the present time, with due reference to the growth of the state-system.

c. English history, with due reference to social and political development.

d. American history, with the elements of civil government.

On examination a candidate must show such general knowledge of the subject in each division offered as may be acquired from the study of an accurate text-book of not less than three hundred pages. Since the questions will be so framed as to require comparison and the use of judgment rather than mere exercise of memory on the part of the pupil, it is recommended that the teacher prescribe a course of supplementary reading of not less than three hundred pages dealing with the more important periods and events in each division offered. Geographical knowledge will be tested by requiring the location of places, boundaries, and movements on an outline map.

Advanced (counting one unit)

Candidates offering advanced history will be required to have performed work of the same kind, amount, and quality as that required for History A1-A2—the course prescribed in Barnard College. The work done at school, therefore, should be substantially identical with that course, the nature of which is explained in a syllabus that may be obtained at the University Bookstore. Those candidates who desire to offer history as an advanced subject must have offered for elementary history either *a* and *b* or *c* and *d* and must present themselves for examination upon the two divisions *which they did not offer as an elementary subject*. The examination will presuppose superior ability on the part of the candidate to understand the significance of historical events, movements, or tendencies, to discern similarities and contrasts and to combine results. Especial care should be exercised, therefore, in the selection of the supplementary reading on the more important periods and events in each of the two divisions.

As further evidence of proficiency, satisfactory written work must be presented in the form of a note-book, or bound collection of notes (see Submission of Note-books, p. 43), which must contain not less

than five thousand words on each division offered, and must show practice in at least three of the following exercises.

- (a) Notes and digests of reading outside of the text-books.
- (b) Written recitations requiring the use of judgment, and the application to new questions of knowledge already gained.
- (c) Written parallels between historical characters, events, or periods.
- (d) Brief studies of topics limited in scope, prepared outside the class-room and illustrated by some reference to contemporary material.
- (e) Historical maps or charts showing explorations, migrations, conquests, territorial changes, or social phenomena.

ITALIAN

Elementary (counting two units)

THE AIM OF THE INSTRUCTION.—At the end of the course the pupil should be able to pronounce Italian accurately, to read at sight easy Italian prose, to put into Italian simple English sentences taken from the language of everyday life, or based upon a portion of the Italian text read, and to answer correctly questions on the rudiments of the grammar, as defined below.

THE WORK TO BE DONE.—During the first year the work should comprise: (1) careful drill in pronunciation; (2) the rudiments of grammar, including the conjugation of the regular and the more common irregular verbs, the inflection of nouns, adjectives, and pronouns, and the elementary rules of syntax; (3) abundant exercises illustrating the principles of grammar; (4) the reading and accurate rendering into good English of from 100 to 175 duodecimo pages of graduated texts, with the translation into Italian of easy variations of the sentences read; (5) writing Italian from dictation.

During the second year the work should comprise: (1) the reading of from 250 to 400 pages of modern prose from different authors and of easy poetry; (2) practice in translating Italian into English, and English variations of the text into Italian; (3) continued study of the elements of grammar and of syntax; (4) mastery of all but the rare irregular verb-forms and of the simpler uses of the moods and tenses; (5) writing Italian from dictation.

Suitable texts for the second year are: E. DeAmicis' *Cuore*; G. Giacosa's *Acquazzoni in montagna*; P. Zambri's *Il caporale di settimana*; G. Gozzi's *Poesie e prosce*, scelte da A. Pippi; G. C. Abba's *Da Quarto al Volturno*; Guido Zalorsi's *Guardare e pensare*; S. Zarira's *Il Signor Io*; A. Stoppani's *Il bel paese*.

LATIN

Elementary (counting four units)

NOTE.—Candidates for admission to the A.B. course must offer *a*, *c*, *d*, *l*, and *m* to secure the four (4) prescribed units. Candidates for admission to the B.S. course or

to the general two-years' course, may offer *a* and either *c* or *d* to obtain two (2) units of credit.

a. i. Grammar. The inflections; the simpler rules for composition and derivation of words, syntax of cases and verbs, structure of the sentence in general, with particular regard to relative and conditional sentences, indirect discourse, and the subjunctive.

ii. Elementary Prose Composition. Translation into Latin of detached sentences and very easy, continuous prose based upon Cæsar and Cicero.

Latin a. i. and ii. is considered a single, indivisible subject.

c. Cicero. Any six orations from the following list, but preferably the first six mentioned:

The four orations against Cataline, Archias, and the Manilian Law, Marcellus, Roscius, Milo, Sestius, Ligarius, the Fourteenth Philippic.

d. Virgil. The first six books of the *Æneid*, and so much of prosody as relates to accent, versification in general, and the dactylic hexameter.

l. Prose Composition. Translation into Latin of continuous prose of moderate difficulty based on Cicero.

m. Elementary Sight Translation of Prose. Translation into English at sight, based exclusively on prose of no greater difficulty than the easier parts of Cicero's orations.

Advanced (counting one unit)

Candidates offering Advanced Latin will be required to have covered substantially the same ground as that included under the course prescribed for freshmen. In Horace, for which no equivalent will ordinarily be accepted, the minimum requirement will be the first and third books of the *Odes*, with a satisfactory knowledge of the prosody. The candidate must also offer Livy, Book XXI entire, and Book XXII, chapters 41-53, inclusive (or Virgil's *Eclogues* and *Selections* from Ovid), and in prose composition fifteen exercises from Part I and ten exercises from Part II, of Gildersleeve and Lodge's *Prose Composition*.

If candidates wish to offer equivalents for any of the subjects named, they must designate them when they apply for examination in this subject.

MATHEMATICS

Elementary (counting three units)

a. Elementary algebra.

i. The four fundamental operations for rational algebraic expressions; factoring, determination of highest common factor and lowest common multiple by factoring; fractions, including complex fractions, ratio and proportion; linear equations, both numerical and literal, containing one or more unknown quantities; problems depending on linear equations; radicals, including the extraction of the square root of polynomials and of numbers; exponents, including the fractional and negative.

ii. Quadratic equations, both numerical and literal; simple cases of equations with one or more unknown quantities, that can be solved by the methods of linear or quadratic equations; problems depending upon quadratic equations; the binomial theorem for positive integral exponents; the formulas for the n th term and the sum of the terms of arithmetic and geometric progressions, with applications.

It is assumed that pupils will be required throughout the course to solve numerous problems which involve putting questions into equations. Some of these problems should be chosen from mensuration, from physics, and from commercial life. The use of graphical methods and illustrations, particularly in connection with the solution of equations, is also expected.

c. Plane geometry.

The usual theorems and constructions of good text-books, including the general properties of plane rectilinear figures; the circle and the measurement of angles; similar polygons; areas; regular polygons, and the measurement of the circle; the solution of numerous original exercises, including loci problems; applications to the mensuration of lines and plane surfaces.

Advanced (counting one unit)

d. Solid geometry.

The usual theorems and constructions of good text-books; including the relations of planes and lines in space; the properties and measurements of prisms, pyramids, cylinders, and cones; the sphere and the spherical triangle; the solution of numerous original exercises, including loci problems; applications to the mensuration of surfaces and solids.

f. Plane trigonometry.

Definitions of relations of the six trigonometric functions as ratios, circular measurement of angles; proofs of principal formulas, in particular for the sine, cosine, and tangent of the sum and the difference of two angles, of the double angle and the half angle, the product of expressions for the sum or the difference of two sines or of two cosines, etc.; the transformation of trigonometric expressions by means of these formulas; solution of trigonometric equations of a simple character; theory and use of logarithms (without the introduction of work involving infinite series); the solution of right and oblique triangles, and practical applications.

MUSIC (counting one unit)

The candidate may offer either *a* or *b*.

a. **Musical Appreciation (counting one unit)**

The candidate is expected to have:

1. A general knowledge of the principal musical forms—song,

classic, dance, fugue, sonata (all movements), symphony—and of their historical development.

2. A general knowledge of the lives and environment of at least ten composers, including Bach, Mozart, Beethoven, Schubert, Chopin, and five of the following: Purcell, Handel, Gluck, Haydn, Cherubini, Weber, Rossini, Glinka, Mendelssohn, Schumann, Wagner, Verdi;

3.¹ Familiarity with certain designated works. The works set for 1909, 1910, and 1911 are:

<i>Bach:</i>	Prelude I and Fugue I from Well-Tempered Clavichord. Gavotte from Sixth Violoncello Suite.
<i>Handel:</i>	Air with Variations ("The Harmonious Blacksmith").
<i>Haydn:</i>	Largo from String Quartet (op. 74, No. 3).
<i>Mozart:</i>	Overture to "The Magic Flute." Symphony in G Minor (entire).
<i>Beethoven:</i>	Sonata Pathétique (op. 13, entire). Larghetto from Second Symphony. Allegro con Brio from Fifth Symphony.
<i>Weber:</i>	Overture to "Der Freischütz."
<i>Schubert:</i>	Moment Musical in F Minor (op. 94, No. 3). Song, "The Erl-King." Song, "Hark, Hark, Hark, the Lark."
<i>Mendelssohn:</i>	Scherzo from "Midsummer Night's Dream." "Spinning Song" (op. 67, No. 4).
<i>Chopin:</i>	Polonaise (op. 40, No. 1). Nocturne (op. 37, No. 2).
<i>Schumann:</i>	"Aufschwung" (op. 12, No. 2). Song, "Im wunderschönen Monat Mai."
<i>Wagner:</i>	Overture to "Tannhäuser." Siegfried's Funeral March, from "Götterdämmerung."

In the examination in 3 the candidate will be expected to identify characteristic portions of the works set, when played by the examiner, and to give intelligent information concerning the form and character of the works themselves. The test will not require ability to perform nor to read from printed music.

b. Harmony (counting one unit)

The candidate should have acquired:

1. The ability to harmonize, in four vocal parts, simple melodies of not fewer than eight measures, in soprano or in bass—these melodies will require a knowledge of triads and inversions, of diatonic seventh chords and inversions, in the major and minor modes; and of modulation, transient or complete, to nearly-related keys;

¹ The examination in 3 will be held only in September and in January, and will be open only to candidates who have passed the examination in 1 and 2.

2. Analytical knowledge of ninth chords, all non-harmonic tones, and altered chords (including augmented chords). [Students are encouraged to apply this knowledge in their harmonization.]

It is urgently recommended that systematic ear-training (as to interval, melody, and chord) be a part of the preparation for this examination. Simple exercises in harmonization at the pianoforte are recommended. The students will be expected to have a full knowledge of the rudiments of music, scales, intervals, and staff-notation, including the terms and expression-marks in common use.

PHYSICS (counting one unit)

The candidate's preparation in physics should include:

a. The study of a standard text-book, supplemented by the use of many varied numerical problems, to the end that the pupil may gain a comprehensive and connected view of the most important facts and laws in elementary physics.

b. Instruction by lecture-table demonstrations, to be used mainly as a basis for questioning upon the general principles involved in the pupil's laboratory investigations.

c. Individual laboratory work, comprising at least thirty-five exercises distributed about as follows: mechanics 13, sound 3, heat 5, light 6, electricity 8. An indexed note-book of the experiments must be submitted. (See Submission of Note-books, page 43.)

PHYSIOGRAPHY (counting one unit)

NOTE.—This is identical with the subject called Geography by the College Entrance Examination Board.

The candidate's preparation in physiography should include the study of one of the modern text-books by Davis, Tarr, Dryer, or Gilbert and Brigham, together with an approved laboratory and field course of at least forty exercises actually performed by the candidate. Each division of the subject should receive approximately the same proportion of attention in the laboratory as in the class-work. It is suggested that the exercises be divided somewhat as follows: Earth as a globe, 5; Ocean, 5; Atmosphere, 12; Land, 18. An indexed note-book containing the record of these exercises must be submitted. (See Submission of Note-books, page 43.)

SPANISH

Elementary (counting two units)

THE AIM OF THE INSTRUCTION.—At the end of the course the pupil should be able to pronounce Spanish accurately, to read at sight easy Spanish prose, to put into Spanish simple English sentences taken from the language of everyday life, or based upon a portion of the Spanish text read, and to answer questions on the rudiments of the grammar, as defined below.

THE WORK TO BE DONE.—During the first year the work should comprise: (1) careful drill in pronunciation; (2) the rudiments of grammar, including the conjugation of the regular and the more common irregular verbs, the inflection of nouns, adjectives, and pronouns, and the elementary rules of syntax; (3) exercises containing illustrations of the principles of grammar; (4) the reading and accurate rendering into good English of from 100 to 175 duodecimo pages of graduated texts, with translation into Spanish of easy variations of the sentences read; (5) writing Spanish from dictation.

During the second year the work should comprise: (1) the reading of from 250 to 400 pages of modern prose from different authors; (2) practice in translating Spanish into English, and English variations of the text into Spanish; (3) continued study of the elements of grammar and syntax; (4) mastery of all but the rare irregular verb-forms and of the simpler uses of the moods and tenses; (5) writing Spanish from dictation.

Suitable texts for the second year are: Valera's *El pájaro verde*; Alarcón's *El final de Norma*, *El capitán Veneno*; Valdès's *José*; Galdós's *Doña Perfecta*; *Marianela*; Padre Isla's version of *Gil Blas*; Carrion and Aza's *Zaragüeta*.

ZOOLOGY (counting one unit)

The following outline includes the principles of zoölogy which are indispensable to a general survey of the science. It is planned for a full year's course. It is not intended to indicate order of study of the topics—this must be left to the teacher and the text-book.

1. The general natural history—including general external structure in relation to the adaptations, life histories, geographical range, relations to other plants and animals, and economic relations—of common vertebrates and invertebrates so far as representatives of these groups are obtainable in the locality where the course is given. The types suggested are a mammal, bird, lizard, snake, turtle, newt, frog, dogfish or shark, bony fish, clam, snail, starfish, earthworm, planarian, hydra, sea-anemone paramoecium. In the case of arthropods, pupils should become familiar with common crustaceans, spiders, myriapods, and insects representing at least five orders. Actual examination of common animals with reference to the above points should be supplemented by reading giving natural-history information.

It is not expected that there will be time for making extensive note-books on the natural-history work; rather will the work in this line take the form of laboratory demonstrations. So far as time permits, drawings and notes should be made. The note-book mentioned below should contain at least drawings on the external structure of four animals not studied under Section 3, preferably two insects, a mollusk, and a second vertebrate.

2. The classification of animals into phyla and leading classes (except the modern subdivisions of the worms) and the great charac-

teristics of these groups—in the case of insects and vertebrates the characteristics of the prominent orders. The teaching of classification should be by practical work so as to train the pupil to recognize animals and to point out the chief taxonomic characteristics. The meaning of species, genera, and larger groups should be developed by constructive practical work with representatives of insect or vertebrate orders.

3. The general plan of external and internal structure, not the anatomical minutiae, of one vertebrate (preferably frog or fish) in general comparison with human body; an arthropod (preferably a decapod); an annelid (earthworm or *Nereis*); a coelenterate (hydroid, hydra, or sea anemone); a protozoön (a ciliate, and amœba when possible). In place of any of the above types not locally available there may be substituted a second vertebrate, an insect, a mollusk, or an echinoderm. Tissues, the study of which is recommended as optional,¹ should be examined first with the unaided eye, in such a structure as a frog's leg, and then with a microscope demonstrate the relations of cells and intercellular substance in epithelium and cartilage; and, if possible, in other tissues. The functions of the chief tissues and their positions in the body of a vertebrate should be pointed out.

4. (a) The general physiology of above types, involving the essentials of digestion, absorption, circulation (respiration), cell-metabolism, secretion, excretion, and nervous functions. This should apply comparatively the essentials of elementary work in human physiology. Demonstrations and experiments, such as are suggested in high-school text-books on human physiology, should be introduced, or recalled if not previously well presented in elementary physiology, in connection with discussion of the chief functions. As far as practicable structure and function should be studied together.

(b) Comparison of the general life-processes in animals and plants (in connection with botany if zoölogy is first studied).

5. The very general features of asexual reproduction of a protozoön (preferably *Paramœcium*); alteration of generations in hydroids; reproduction and regenerations of *Hydra*; the very general external features of embryological development in a fish or frog; and (*optional*) the general cellular nature (not centrosomes and the like) of germ-cells, fertilization and cell-division in developing eggs should, as far as possible, be demonstrated and briefly described. Also, the most interesting features of development should be pointed out in the case of other animals studied.

6. The prominent evidence of relationship, suggesting evolution, within such groups as the decapods, the insects, and the vertebrates should be demonstrated. A few facts indicating the struggle for existence, adaptation to environment, variations of individuals, and man's selective influence should be pointed out; but the factors

¹ Topics marked "optional" are regarded as desirable for the best high-school zoölogy but will not be required in examinations.

of evolution and the discussion of its theories should not be attempted.

7. (*Optional*) Some leading facts regarding the epoch-making discoveries of biological history and the careers of such eminent naturalists as Darwin, Huxley, Pasteur, and Agassiz should be presented.

The above outline of a course in general zoölogy should be developed on the basis of a course of laboratory study guided by definite directions. This should be supplemented by the careful reading of at least one modern elementary text-book in general zoölogy. At least two thirds of the time should be devoted to the practical studies of the laboratory. If good nature studies have not preceded the course in high-school zoölogy, pupils should be encouraged to do supplementary work in the line of natural history. A note-book with carefully labelled outline drawings of the chief structures studied anatomically (Section 3), and the drawings mentioned under natural history (Section 1), and with notes on demonstrations and in explanation of drawings, with dates and an index, must be submitted. It will be counted as one third of the examination. (See Submission of Note-books, below.)

SUBMISSION OF NOTE-BOOKS, DRAWINGS, ETC.

All work submitted must be duly certified to in ink by the teacher in the following form:

I certify that this note-book is a true and original record of work actually performed by.....while in attendance at.....
.....during the year 19...

Instructor in.....

Drawings should bear a similar certification, or, in case of work not done under instruction, should be accompanied by the candidate's own signed declaration.

All note-books, unless otherwise specified, should be submitted at the time of examination. Candidates desiring their return should apply after the June examinations to the Secretary of the College Entrance Examination Board; after the September and January examinations to the Secretary of the University.

English exercise books, submitted in lieu of examination, advanced English essays, or advanced history note-books should be sent to the Secretary of the University *at least two weeks before the examinations begin*. Within ten days the candidate will be informed whether or not the work submitted has been accepted. English exercise books will *not* be returned to the writers.

All note-books uncalled for one year from the date of submission will be destroyed.

REGISTRATION AND ENROLMENT

All properly qualified students, with the exception of those classed as non-matriculated special students (see p. 25), may matriculate

at Barnard College either as candidates for a degree or as special students who are permitted to attend such courses as they are qualified to take but who are not enrolled as candidates for a degree.

Matriculation

Before attending any academic exercise every student must comply with the regulations in regard to registration and payment of fees.

Registration She must present herself in person to furnish the information necessary for the College records.

Every new student must also at the time of registration file a statement of the courses which the Dean, on the recommendation of the Committee on Instruction, has authorized her to pursue.

Enrolment for Courses

Students already in College are required to give notice of their choice of elective courses for the ensuing year to the Registrar on or before Friday, May 7, 1909. Proper blanks for this purpose will be provided by the Registrar's office. Students should not confuse the filing of elective blanks with registration.

The office of the Registrar will be open for registration from Wednesday, September 15, to Tuesday, September 21, 1909, and on Saturday morning February 5, 1910. New students may register also on the day following each of these periods.

Students registering later must pay an additional fee of \$5. They may, however, if unable through no fault of their own to complete their registration, file a provisional statement within the statutory period. Students will be held directly accountable for absences incurred owing to late registration.

Every student who holds a scholarship must report at the office of the Registrar not later than the first day of the academic year and obtain a scholarship certificate signed by the Dean. This certificate must be handed to the Bursar at the time of registration.

The Dean, on the recommendation of the Committee on Instruction may for reasons of weight grant a leave of absence to a student in good standing.

An honorable discharge is granted to any adult student in good standing, who may desire to withdraw from the college; a minor must submit the written assent of her parents or guardians.

GENERAL STATEMENT REGARDING FEES AND THE REGULATIONS GOVERNING THEIR PAYMENT

All fees are payable in advance at the Bursar's Office. Every student who fails to register within the limits of time fixed by the regulations of the University shall be permitted to register only with the consent of the Dean, and by the payment of an additional fee of \$5. Students who enter late are required to pay the full charge for tuition for the half-year in which they register.

For an examination or any single series of examinations taken at

any other time than at the conclusion of a course actually attended a fee of \$5 is charged.

The registration or matriculation fee must be paid at the time of entrance before an official record of a student's attendance can be noted.

The Dean may withdraw the privileges of any student who is delinquent in the payment of fees.

Checks should be made payable to the order of Barnard College, and addressed to the office of the Bursar.

Students are requested in cases of withdrawal from the college during the academic year to notify the Registrar in writing without delay. No application for a return of fees can be considered unless such notice is given at the time of withdrawal. Withdrawal

FEES

For Matriculation or Registration \$5 00

Required of all students at entrance. This fee is payable but once and is never refunded.

For late registration (see p. 44) 5 00

For tuition, payable at the beginning of each half-year . . . 75 00

Students not candidates for a degree are charged at the rate of \$7.50 a half-year for each hour of attendance per week on lectures or recitations, with a maximum fee of \$75 for each half-year. If the entire fee is less than \$100.00 the whole must be paid upon registration.

In estimating a fee in laboratory work, two hours are counted as one.

For examination, payable in each case before the examination is held:

For entrance (see p. 19) \$5 00

For any examination or single series of examinations taken at any other time than at the conclusion of a course actually attended, whether taken prior or subsequent to admission 5 00

For the degree 15 00

For laboratory work

Botany (Courses 51, 52, 53, 54, 55, 56), each course . . . 1 25

Botany (Courses 151, 152, 153, 154, 156, 158, 159, 160, 161, 162), each course 2 50

Chemistry (Courses 5, 6), each course 2 50

Chemistry (Courses 63, 64), each course 6 00

Chemistry (Courses 43, 44, 105, 106, 145, 146), each course, 10 00

Zoölogy (Courses 1, 2, 3, 4), each course 2 50

Should Course 3 be taken in connection with Course

1, or Course 4 be taken in connection with Course 2 or Course 102, the one fee covers both courses.	
Zoölogy (Courses 5, 6), each course	\$ 1 25
Zoölogy (Courses 101, 102, 151, 152, 153, 154), each course	2 50
For the use of the gymnasium	7 00
Required of all students.	

DORMITORY FEES

Deposit	\$15 00
Payable in advance to secure assignment of room, and held until final closing of accounts for the year as security for damage to rooms, fittings or furniture, or for any other indebtedness.	
Electricity, charged for by meter	
Board	225 00
Payable in two equal instalments in advance, on or before taking possession of room, and on February 1.	
Rent	
Payable in two equal instalments in advance, on or before taking possession of room, and on February 1.	
Single rooms	\$140-285 00
Two-room suites (for one person)	350-410 00
Three-room suites (for two persons)	440-500 00
Private bath (for one, two, or three persons)	75 00

ESTIMATED NECESSARY EXPENSES

Board \$9 to \$17 a week.
Matriculation fee, \$5.
Annual tuition fee, \$150.
Gymnasium fee, \$7.
Text-books, from \$10 to \$20 each year.
Final examination for the degree, \$15.
The total necessary expenses for a student for the academic year are believed to average about \$18 a week.

RESIDENCE HALL

Brooks Hall, the residence hall for Barnard College students, will open on Monday, September 20, 1909, and will close on Saturday, June 4, 1910. Candidates for admission or students who wish to secure accommodations in Brooks Hall during the week of the September entrance or deficiency examinations, should make arrangements directly with the Mistress of the Hall, not later than September 1.

Full information in regard to the situation and cost of rooms, the advance deposit, the charge for electric light and the residence scholarships is published in a separate pamphlet, to be had on application to

the Secretary of the College, or to the Mistress of Brooks Hall, Barnard College, New York City. For the dormitory fees see p. 47.

The post-office address for residents is Brooks Hall, 607 West 116th Street, New York, N. Y.

THE PROGRAM OF STUDIES

Upon completion of a curriculum arranged on one of the plans to be described below (pp. 48-50) the student is recommended by the Faculty of Barnard College for the degree of Bachelor of Arts or Bachelor of Science.

The principles of the program of studies are as follows:

1. The requirement for graduation is 124 points, the term point signifying the satisfactory completion of work requiring attendance at class one hour or in the laboratory two hours a week for one half-year.

2. Studies are either prescribed, *i. e.*, obligatory upon all candidates for a degree; or elective, *i. e.*, to be taken, with certain restrictions, at the pleasure of the student.

3. Prescribed studies, with the exception of Economics A, must be taken as far as practicable during the first two years of residence; and subjects taken in college which are continuations of subjects offered at entrance must be taken as far as possible in the first year.

4. No other courses than those specified under each half-year in the Announcement may be taken except by students qualified to pursue them with advantage, and with the consent of the Dean, on the recommendation of the Committee on Instruction.

5. Students may not elect less than 12 or more than 16 points of work in any half-year without the consent of the Dean, on the recommendation of the Committee on Instruction.

6. No credit will be given for a one-hour course, unless it is taken in connection with and as a supplement to a cognate course.

7. No more than four hours of work, exclusive of laboratory work, may be taken on the same day.

8. Students are required to take in one department a major subject of 18 points in addition to the prescribed work in that department.

9. Admission to courses depends upon completion of the prerequisites as stated for each course separately. Where no prerequisite is stated the course may be taken and counted for a degree by any student of the college, subject to restrictions noted in the Announcement.

10. To be recommended for a degree, a student must have made at least 84 points in actual college residence, and of these at least 24 in Barnard College. The Faculty has power to suspend this rule in individual cases; but is forbidden by a statute of the University from granting a degree to any person who has not been a member of the University for a full academic year, *i. e.*, two half-years.

11. All requirements for a degree must be fulfilled by the candidate within six years from the time of her first matriculation as a freshman in college, whether at Barnard or elsewhere; within four and a half years from similar matriculation as a sophomore; within three years from similar matriculation as a junior; and within one and a half years from matriculation as a senior. If the candidate fails to satisfy the requirements within the time here specified, she is to lose credit for all the points gained by her toward the degree, unless, in individual cases, the Faculty shall otherwise direct.

12. No extension courses, taken at Columbia or elsewhere, may be credited toward a degree.

13. Change of electives, except on the initiative of the departments or of the Committee on Instruction, will be allowed only in the third week after the opening of the first half-year and in the two weeks preceding the opening of the second half-year.

Before final choice of elective studies, all students should consult the Committee on Instruction, and, in case of any doubt, the instructors in charge of particular courses as well. Electives must be chosen on some consistent plan. Conflicts between courses falling at the same hours are to be avoided by careful study of the Scheme of Attendance at the end of this volume, which has been drawn up with a view to making possible for every one the selection of a reasonable number of harmonious elective courses that shall not conflict in hours with each other or with prescribed courses. It often happens that some of the courses of one department form valuable supplements to certain courses of another, so that combinations of work under two or more departments are very desirable. In all such cases the best selections can be made only after consultation with officers of one or more of the departments concerned. This applies particularly to the major subject of 18 points.

I THE PROGRAM OF STUDIES FOR THE DEGREE OF
BACHELOR OF ARTS

Unless their equivalents have been offered for admission the following courses are prescribed:

English A and B.....	12 points
French A and German A.....	12 "
History A.....	6 "
Latin A or B.....	6 "
Mathematics A.....	6 "
Philosophy A.....	6 "
Physical Education A and B.....	4 "
Economics A.....	6 "
Chemistry 5-6 or Physics 11-12.....	6 "
Botany, Chemistry, Geology, Physics, Experimental Psychology, or Zoölogy; two half-year courses in addition to Chemistry 5-6 or Physics 11-12 or any	

course in science that may have been offered for admission.....	6 points
Major subject of.....	18 "
Free electives to complete the total of.....	124 "

II THE PROGRAM OF STUDIES FOR THE DEGREE OF BACHELOR OF SCIENCE

Unless their equivalents have been offered for admission the following courses are prescribed:

English A and B.....	12 points
French A and German A.....	12 "
History A.....	6 "
Mathematics A.....	6 "
Philosophy A.....	6 "
Physical Education A and B.....	4 "
Grouped work in Astronomy, Botany, Chemistry, Geography, Geology, Mineralogy, Physics, Experimental Psychology, and Zoölogy, amounting to a total of at least.....	70 "
(Of these 70 points at least 28 points shall be taken in a major subject, at least 12 points in an allied minor subject, and at least 12 points in a diverse minor.)	
Free electives to complete the total of.....	124 "

III GENERAL TWO-YEARS' COURSE, NOT LEADING TO A DEGREE

This general course is specially arranged to furnish the collegiate foundation for professional work at Teachers College. It comprises 64 points of work and includes the following prescribed courses unless their equivalents have been offered for admission:

English A or a more advanced course in rhetoric.....	6 points
English Literature: two half-year courses.....	4 or 6 "
French, German, Italian, Spanish: two half-year courses in each of two modern languages, preferably French and German.....	12 "
History A or a more advanced course in history.....	6 "
Physical Education A and B.....	4 "
Botany, Chemistry, Geology, Physics, or Zoölogy: two half-year courses in each of two natural sciences that have not been offered for entrance, at least.....	12 "
Elective courses to complete the total of.....	64 "

In regard to the choice of elective courses a student should seek the advice of the professor in charge of her prospective major subject in Teachers College.

With the consent of the Dean of Barnard College and the Dean of Teachers College a student who has satisfactorily completed 64 points of work in Barnard College, including the courses listed above, may transfer, without examination, to the professional curriculum of

Teachers College and become a candidate for a Teachers College diploma and the degree of Bachelor of Science in Education.

In consequence of the agreement on the part of Barnard College to provide the collegiate courses required by Teachers College for admission to its professional curriculum, Teachers College has withdrawn its collegiate curriculum.

IV OPTIONS IN THE PROFESSIONAL SCHOOLS FOR CANDIDATES FOR A BARNARD COLLEGE DEGREE

A student may plan her work in such a way as to earn a professional diploma from Teachers College at the same time as her academic degree from Barnard College. With the permission of the Dean of Barnard College and the Dean of Teachers College she may transfer to Teachers College at the end of her junior year under the following provisions: A candidate for the degree of Bachelor of Arts must have completed 94 points of work in Barnard College, comprising all of the required courses, including a major subject of at least 18 points and Education A. A candidate for the degree of Bachelor of Science must have completed 94 points of work at Barnard College, comprising all of the specifically prescribed courses and of the grouped work a major subject of at least 28 points with an allied minor subject of 12 points and Education A.

On receipt of a statement from the Faculty of Teachers College that a student so transferred has satisfactorily completed the requirements for the Bachelor's diploma in Teachers College, the student will be recommended by the Faculty of Barnard College for the degree of Bachelor of Arts or Bachelor of Science, provided she shall have fulfilled the requirements for either of those degrees as laid down in the Announcement of Barnard College.

For full details regarding the major subjects in teaching, their requirements and prerequisites in collegiate work, and the most advantageous division of work in education, the student is referred to the current Announcement of Teachers College.

GENERAL REGULATIONS REGARDING EXAMINATIONS IN COURSE, CREDIT, AND ADVANCEMENT

Two examinations are held every year, one in January and the other in May. These are the only *stated examinations*. In 1910 the mid-year examinations begin on Wednesday, January 26, the final examinations on Monday, May 16.

No freshman, sophomore, junior, or special student absent from more than one tenth of the exercises in any course during a single half-year, shall be entitled to attend the stated examination in that course. Each instance of tardiness shall be counted as half an absence. Should such student exceed the limit allowed in any course, she shall be debarred from the stated examina-

tion in that course, and may attend it only by the consent of the Dean on recommendation of the Committee on Instruction.

Every freshman, sophomore, junior, or special student shall be required to file at the office of the Secretary an explanation of any absence or tardiness on the same day that it occurs, or, in cases where the absence has extended over an entire day or more, on the first day after return.

For any examination or any single series of examinations taken at any other time than at the conclusion of a course actually attended a fee of \$5 is charged.

Special delinquent examinations for deficient and debarred students are held for all classes within the two weeks immediately preceding the opening of the college in the fall; and in addition, for members of the senior class only, before the regular final examinations in May.

**Delinquent
Exami-
nations**

At the close of every half-year, and after the stated examination has been held, each officer of instruction shall report to the Committee on Instruction on the work of all the students in his several courses, classifying them in five grades, namely, A, B, C, D, F, according as their work in the course has been excellent, good, fair, poor, or a failure.

Credit

A student who receives a mark of F in any prescribed course must repeat that course. A student who receives a mark of F in any course not prescribed may present herself for re-examination at the time fixed for the delinquent examinations; on passing such examination she shall receive a mark of D only. In either case, however, if the mark of F was given by reason of absence from examination resulting from illness or other unavoidable cause, she may be examined by permission of the Dean, on the recommendation of the Committee on Instruction, and marked without regard to the foregoing rule.

At the end of every half-year, when all the reports are filed in the Registrar's office, additional credit for high standing is given as follows:

The mark A in courses aggregating six points of work (no course to be counted twice) entitles the student to one point of extra credit, provided she has not fallen below the mark B in any of the courses pursued by her during the half-year.

**Additional
Credit for
High
Standing**

Any student who is credited with 94 points (including all prescribed work) may receive one point of extra credit for each of two courses chosen from among those offered by any single department as counting toward a higher degree,¹ provided the quality of her work in such course be tested by an essay for which a mark of A or B is given, in addition to the stated examinations. No student may receive more than

¹ *I. e.*, Master of Arts or Doctor of Philosophy. Such courses are those offered under the Faculty of Political Science, the Faculty of Philosophy, or the Faculty of Pure Science primarily for graduate students, but open also to advanced undergraduates.

one point of extra credit in one half-year under the terms of this rule.

No student may be advanced from the freshman to the sophomore class until she shall (a) have satisfied all the requirements for entrance, and (b) have not less than 20 points to her credit.

**Advance-
ment**

No student may be advanced from the sophomore to the junior class until she shall have not less than 52 points to her credit.

No student may be advanced from the junior to the senior class until she shall have accomplished all the studies of the course specifically required in the first three years and have not less than 94 points to her credit.

No student may count for promotion from any class to the next higher class more than six (6) points of D work. Only twenty-four (24) points of D work can be counted for a degree. Of several courses in which a student is marked D she may choose the ones to be counted. In all cases the requirements as to prerequisites must be completed before the beginning of the academic year.

A student dropped from the roll of her class will not be permitted to attend any of the exercises of the said class without the consent of the Dean, on the recommendation of the Committee on Instruction, given for reasons of weight; but she may enter the next succeeding class and pursue the course or courses in which her deficiency exists, or, in case of elective courses and with the consent of the Dean, on recommendation of the Committee on Instruction, other course or courses equivalent thereto in time, and present herself for examination in such course or courses with that class. No student dropped from the roll of her class under the provisions of this section will be accepted as a special student.

Should a student fail of advancement in two successive years, she shall be dropped from the roll of the College, unless, for reasons of weight, the Dean, on the recommendation of the Committee on Instruction, shall otherwise determine. No student dropped from the roll of the College under the provisions of this section will be accepted as a special student.

SCHOLARSHIPS

There are altogether forty scholarships and three special funds for the benefit of students who need financial aid. The value of each of

**Number and
Value**

these scholarships, unless otherwise stated, is \$150 annually, which sum is applicable to the fees of the year. Under certain circumstances those scholarships known as Student Scholarships may be divided between two applicants.

The scholarships are of two sorts, competitive and non-competitive. The former are awarded for excellence in entrance examinations on the nomination of the Committee on Admissions. The latter are awarded by the Committee of the Trustees on Scholarships, on the nomination of the Faculty Committee on Scholarships,

Character

to students needing financial aid who have passed at least one year in college. They are held, unless otherwise stated, *for one year only*.

Two scholarships may not be held by the same person. Should two scholarships be assigned to the same student in one year, she must at once make choice as to which she will retain.

If a student fail to maintain a grade of at least C in all courses which she pursues, or if for any other reason she show herself an unsatisfactory candidate, she shall forfeit her scholarship and, in the case of non-competitive scholarships, shall be ineligible for re-election the following year. No student with entrance conditions unremoved, or with a grade below C in the year previous to that in which she is asking for help, will be eligible for a scholarship. For competitive scholarships complete entrance examinations in all subjects, *i. e.* a total of fifteen (15) units are required. These may be taken in January or in June unless otherwise stated.

Before the first of April of each year all applications for non-competitive scholarships, accompanied with full credentials, must be filed at the Dean's office upon special blanks to be obtained there. Candidates for the competitive scholarships to be awarded on the basis of the June examinations should, in their application to the Secretary of the College Entrance Examinations Board (see p. 19), mention the Barnard College scholarships for which they are competing. In order to qualify for the receipt of her stipend, the holder of a scholarship should report at the office of the Registrar not later than the first day of the academic year.

COMPETITIVE SCHOLARSHIPS

These, subject to the foregoing general regulations for scholarships, are as follows:

1. *Open to all Students:*

Trustees' Competitive Scholarship..... 1

Awarded annually by the Board of Trustees to the student who in June passes the best complete entrance examination in all subjects. It may be held for one year only.

Jessie Kaufmann Scholarship..... 1

Founded in 1902 by Mr. Julius Kaufmann in memory of his daughter, Jessie Kaufmann. The annual income from \$4,000 is awarded on the merits of the entrance examinations to a student who, after careful investigation, is found to have no relative able to assist her financially. It may be held for the entire college course.

2. *Open to particular Students:*

Brooklyn Scholarships..... 12

Founded in 1895 by the Trustees of Columbia University in recognition of the gift to Columbia University by President Low of a memorial building for the Uni-

versity Library. They are open to students who have received their training in either the public or the private schools of Brooklyn, N. Y., and are residents of that city. Three of these scholarships will be awarded annually to qualified competitors who pass in June, without conditions, the best complete entrance examinations in all subjects. They may be held for the entire college course, but a holder, while retaining the title "Brooklyn Scholar," may transfer the income to any properly qualified candidate from Brooklyn without having her action made a matter of public record.

Lucille Pulitzer Scholarships..... 3

Founded by Mr. Joseph Pulitzer in memory of his daughter, Lucille Pulitzer. They are awarded to undergraduate students entering the college from the city of New York who are found to have passed excellent entrance examinations and to be worthy of financial aid. They may be held for the first three years of the college course only.

The first (a), founded in 1899, is the income of \$10,000 and will be awarded in 1909, 1912, and corresponding years. The second and third, given in 1903, represent each one half the income of \$15,000; (b) will be awarded in 1910 and 1913, (c) in 1911 and 1914, and corresponding years.

NON-COMPETITIVE SCHOLARSHIPS

These, subject to the general regulations for scholarships, are as follows:

1. *Open to all Students:*

Student Scholarships..... 12

Given by the Committee of the Trustees on Scholarships. They are supported by the income of a permanent fund that is being established and that at present amounts to \$9,680 and of the Arthur Brooks Fund (see below). The remainder is supplied by annual provision. These are not, as a rule, assigned to incoming students.

Ella Weed Scholarship..... 1

Founded by the pupils of Miss Anne Brown's School in memory of Miss Ella Weed, who was chairman of the Academic Committee of the Board of Trustees of Barnard College during the first five years of its existence.

Veltin School Scholarship..... 1

Founded in 1905 by the alumnae of Mlle. Veltin's School.

Jennie B. Clarkson Scholarship..... 1

Founded in 1898 by the late Mrs. W. R. Clarkson.

- Emily James Smith Scholarship..... I
 Founded in 1899 by Miss Emily H. Bourne in honor of Miss Smith, then Dean of Barnard College. It is awarded in conference with the founder.
- Anna E. Barnard Scholarship..... I
 Founded in 1899 by Miss Emily H. Bourne in honor of Mrs. John G. Barnard. It is awarded in conference with the founder.
- Brearley School Scholarship..... I
 Founded in 1899 by pupils and former pupils of the Brearley School.
- Eliza Taylor Chisholm Memorial Scholarship..... I
 Founded in 1901 by the Alumnae Association of Miss Chisholm's School, which association reserves the privilege of precedence for such candidates as it may recommend.
- Graham School Scholarship..... I
 Founded in 1907 by the Graham Alumnae Association.
2. *Open to Particular Students:*
- Mrs. Donald McLean Scholarship..... I
 Founded in 1906 by the New York Chapter of the Daughters of the American Revolution. It is awarded, in conference with a representative of the Chapter, to a deserving student who agrees to pursue the study of history (chiefly that of the United States) continuously throughout her college course.
- Emma Hertzog Scholarship..... I
 Founded in 1904 by gifts from residents of Yonkers, N. Y. It is awarded, in conference with the Faculty of the Yonkers High School, to a graduate of that school.
- Mrs. Henry Clark Coe Scholarship..... I
 Given in 1904 by the National Society of New England Women. It is awarded, on the nomination of the chairman of the Scholarship Committee of the above Society, to a student from New England or of New England parentage, and after the award is once made the Society requires from the beneficiary full obedience to discipline and the highest ideals of scholarship.
3. *Special Funds for the Aid of Needy and Deserving Students:*
- Arthur Brooks Fund.
 A fund of \$5,000, given in 1897 by Miss Olivia E. Phelps Stokes as a memorial of the Reverend Arthur Brooks, D.D., Rector of the Church of the Incarnation and Chairman of the Board of Trustees of Barnard College during the first six years of its existence. This fund is at present applied to the maintenance of the Student Scholarships

Fiske Scholarship Fund.

A fund of \$5,000, given by the late Mrs. Martha T. Fiske-Collord, the income of which is placed at the disposal of the Dean of Barnard College.

George W. Smith Scholarship Fund.

A fund of \$5,000 given in 1906 by the late Mrs. Martha T. Fiske-Collord as a memorial to Mr. George W. Smith, who was a Trustee of Barnard College. The income of the fund is placed at the disposal of the Dean of the College.

PRIZES

The following prizes are awarded annually, on the recommendation of the appropriate departments of the Faculty of Barnard College, in accordance with the special conditions named below. No prize will be awarded to any student who falls below grade C in any course during the year in which she is a competitor.

HERRMAN BOTANICAL PRIZE

A prize of \$50, founded by Mrs. Esther Herrman, is awarded annually to the most proficient undergraduate student in botany.

KOHN MATHEMATICAL PRIZE

A prize of \$50, founded by Mrs. S. H. Kohn, is awarded annually to a senior for excellence in mathematics. Competitors for this prize must have pursued mathematics continuously during their college course.

THE JENNY A. GERARD MEDAL

The Jenny A. Gerard Gold Medal, given in 1908 by the Society of the Colonial Dames of America in memory of Mrs. James Gerard, late President of the Society, is awarded annually to the undergraduate student of American birth in Barnard College who presents the best essay on an assigned subject in American Colonial History. The successful essay or a copy thereof is to be sent to the society. The subjects for the essays to be handed in May 1, 1909, are "Bacon's Rebellion in Virginia," or "The Origin of the Struggle between the French and the English for the Possession of North America," or "The Repeal of the Stamp Act"; 1910, "Sir Edmund Andros as a Colonial Governor," or "Leisler's Rebellion in New York," or "The Albany Congress of 1754."

THE FLARSHEIM PRIZE

A prize of \$50, given by Mr. Morris H. Flarsheim of Louisville, Ky., in memory of his daughter Helen Amelia Flarsheim, will be awarded to a member of the Class of 1911, of which Miss Flarsheim was to have been a member, for excellence in English Composition during the year

1908-1909, for excellence in English during the year 1909-1910, and for general excellence in scholarship during the year 1910-1911.

THE BUNNER MEDAL

The H. C. Bunner Gold Medal, established by the friends of the late Henry Cuyler Bunner, is awarded annually at Commencement to the candidate for a Columbia degree who shall present the best essay on an assigned subject in American literature. The award will be made by a committee to be appointed by the President. The subject for the essay to be handed in May 1, 1909, is "Foreign Influences on Longfellow's Poetry"; 1910, "American Humorists before the Civil War."

EARLE PRIZE IN CLASSICS

A prize of \$50, established in memory of Mortimer Lamson Earle, Instructor in Greek in Barnard College from 1889 to 1895 and from 1898 to 1900, and Professor of Classical Philology from 1900 to 1905, will be open for annual competition to all candidates for the degree of Bachelor of Arts. It will be awarded partly on the basis of the regular work of the year in Greek and in Latin, partly on the basis of a special examination held in May or June. The special examination will cover specified portions of Greek and Latin literature, sight-reading in Greek and in Latin, and prose composition in Greek and in Latin. The special subjects for 1909 will be the *Gorgias* of Plato and Book V of Lucretius; for 1910, the *Clouds* of Aristophanes and Books XII and XIII of the *Annales* of Tacitus.

HONORS

Honors are of two kinds, departmental and general honors. Departmental honors will be granted in any year in any department for high excellence indicated by the grade of A obtained in courses aggregating at least six points and by the satisfactory performance of additional assigned work. Students must announce their candidacy to the head of the department not later than April 1 of the year of candidacy.

**Departmental
Honors**

Except by special decision of the Committee on Honors, no student falling below C in any of the courses taken by her during the year of candidacy will receive honors.

A student who has won honors in any department successively during the last three years of her college residence shall be granted at graduation highest final honors in said department.

General honors will be granted at the end of every college year to students who during that year have obtained grade A in the majority of the courses taken by them, provided they have not fallen below Grade B in any course in said year.

**General
Honors**

Highest final general honors will be granted at graduation to all students who have obtained grade A in the majority of the courses taken by them during the last three years of college residence, provided they have not fallen below grade B in any course in said years.

THE UNIVERSITY LIBRARY

The University Library is open each week-day (except Thanksgiving, Christmas, Good Friday, and Independence Day) from 8.30 A.M. until 11 P.M., October-June; and until 10 P.M., July-September. All officers, students, and graduates of all departments of the University have free access to the Library and may draw books for home use.

The Library contains about 420,000 volumes, exclusive of unbound pamphlets and duplicates, and some 30,000 German dissertations. About 10,000 carefully selected reference books and the most important works on all subjects, in standard editions, representing the leading authors in all literatures, are placed in the general reading-room directly accessible to all readers.

For the convenience of the undergraduates of Barnard College there is also maintained in the Ella Weed Memorial Reading-room at Barnard College a carefully selected reference library of about 4,000 volumes.

An accurate catalogue of the entire Library by authors and subjects is on cards accessible to readers.

CHAPEL SERVICE

Chapel service is held on Tuesday and Friday of each week at 12 o'clock in the college assembly room. The service lasts about twenty minutes and is usually conducted by some clergyman of the city or by some officer of the University. Attendance is entirely voluntary.

STATISTICS

The following tabular statement indicates the growth of the College from its foundation:

[illegible]

DEPARTMENTAL STATEMENTS

The following general regulations apply to all courses:

When an announced course has not been applied for by at least three candidates for a degree, the instructor may withdraw it.

Where the hours for laboratory work are not given either in the departmental statement or in the scheme of attendance, they must be arranged after consultation with the officer in charge of the course.

Prescribed courses are designated by capital letters. Elective courses are designated by numbers, odd numbers for the first half-year courses and even numbers for the second half-year courses. A compound course is therefore designated by an odd number and the succeeding even number. The numbers from 1 to 99 inclusive are given to courses open only to undergraduates; the numbers from 101 to 199 inclusive are given to courses open to both undergraduates and graduates; the lower numbers in each case being used for the introductory courses.

In the statement of each course the prerequisites are indicated. When no department is named it is to be assumed that the reference is to a numbered course in the same department.

A hyphenated course (*e. g.*, History **A1-A2**) is regarded as a full year course of which the first half is always assumed to be a prerequisite for admission to the second half, and no credit will be given for work dropped at the mid-years or before the completion of the course. A course of which the index signs are separated by a comma (*e. g.*, English **A1, A2**) is regarded as a divisible course of which each half-year may be taken separately.

Courses marked with an asterisk (*) are given at Columbia University. Courses marked with a dagger (†) are given at Teachers College.

Work at Teachers College mentioned herein may be pursued only by regularly enrolled students of Barnard College and only when counting for a Barnard College degree. Certain courses not here specified as being open at Teachers College may, through the courtesy of Teachers College and with the consent of the Committee on Instruction, be taken by such students; but in no case may courses in Education not announced in the Announcement be elected by students who are not candidates for a professional degree in Teachers College. All special students of whatever class should enroll for work at Teachers College through the Extension Department.

For more detailed information in regard to topics, text-books, or methods, in any particular course, students are referred to the instructors.

ANTHROPOLOGY

1—General Introductory Course. Professor FARRAND. 4 points.

M., W., and F. at 1, and one hour to be arranged.

Open to juniors and seniors.

This course consists of an outline of comparative anthropology. A general discussion of the physical characters of the earliest human remains and their relations to present forms is given. Special stress is laid on the discussion of the mental development of primitive man, together with a description of types of primitive culture and an inquiry into the relation and development of particular phases of culture.

2—General Introductory Course. Professor BOAS. 4 points.

M., W., and F. at 1, and one hour to be arranged.

Open to juniors and seniors.

In this course the subject-matter of anthropology is discussed from an historical and geographical point of view. A general survey of races, languages, and types of culture is given and the growth of each type of culture as influenced by migration of cultural elements is traced. The history of domesticated animals, of cultivated plants, of industries and of beliefs and institutions is thus treated.

Courses 103, Prehistoric Archæology, Professor SAVILLE and Dr. BERKEY; 104, Prehistoric Archæology of America, Professor SAVILLE and Dr. BERKEY; 105, 106, Ethnology, Primitive Culture, Professor FARRAND; 111, 112, Races of Europe, Professor BOAS; 115, Archæology of the Northern Part of Mexico, Professor SAVILLE; 116, Archæology of Southern Mexico and Central America, Professor SAVILLE; 117, 118, American Languages, Professor BOAS; 121-122, Anthropometry, Professor BOAS; 127, Archæology of Peru, Mr. BANDELIER; 129, 130, American Languages, advanced course, Professor BOAS, given at Columbia University, are open, with the consent of the Department of Anthropology and the Committee on Instruction, to properly qualified seniors. For fuller information students are referred to the Announcement of the Division of Philosophy, Psychology, and Anthropology.

ARCHITECTURE

***21-22—Ancient Architectural History.** Mr. LUDLOW. 6 points.

Tu. and Th. at 10.

***23-24—Mediæval Architectural History.** Early Christian, Byzantine, Romanesque, Gothic, and Oriental architecture. Professor HAMLIN and Mr. LUDLOW. Lectures, 4 points; research work, 2 points.

M., Tu., Th. and F. at 9, second half-year only. Research, afternoons of five weeks of second half-year (optional); dates to be arranged in conference with the instructors.

***25-26—Modern Architectural History.** The Renaissance, modern revivals, and American architecture. Professor HAMLIN and Mr. LUDLOW. Lectures, 4 points; research work, 2 points.

M., Tu., Th., and F. at 11, second half-year only. Research, afternoons of five weeks of second half-year (optional); dates to be arranged in conference with the instructors.

ASTRONOMY

***1, 2—General Astronomy.** Professor JACOBY, first half-year; Professor MITCHELL, second half-year. 6 points.

Tu. and Th. at 11, and fortnightly evening attendance in the Wilde Observatory at hours to be arranged.

Prerequisite: Mathematics A.

This course is introductory and descriptive; intended for students who do not desire to specialize. The lectures are illustrated by experiments and the stereopticon. Observatory work includes observation of the sun and moon, planets, satellites, nebulae and stars.

Course 103, 104, Practical Astronomy, Professors MITCHELL and JACOBY, given at Columbia University, is open with the consent of the Department of Astronomy and the Committee on Instruction, to properly qualified seniors. For fuller information students are referred to the Announcement of the Division of Mathematical and Physical Science.

BOTANY

51-52—Principles of the Morphology and Physiology of Plants. Professor RICHARDS, Miss LATHAM, and Miss KINGSLEY. 2 lectures, 4 hours of laboratory work. Demonstrations to accompany lectures. 8 points.

Lectures M. and F. at 9. Demonstrations W. at 9.

Laboratory fee, \$2.50.

53-54—General Morphology and Development of Plants, Study of Types. Dr. HAZEN and Miss KINGSLEY. 2 lectures, 4 or 6 hours of laboratory work, 8 or 10 points.

Tu. and Th. at 11.

Laboratory fee, \$2.50.

Course 53-54 is not open to freshmen. It should ordinarily be preceded by 51-52 but is open, on consultation with the instructor, to students of sufficient training who also either attend the lectures 51-52 or elect the full 6 hours of laboratory work in Course 53-54.

55-56—Morphology and Classification of Spermatophytes, Study of the Natural Orders. Dr. HAZEN. 1 hour lecture or conference, 4 or 6 hours of laboratory work. 6 or 8 points.

M. at 3.

Laboratory fee, \$2.50.

Prerequisite: Course 51-52 or entrance botany.

[151-152—Bacteriology. 1 lecture and a minimum of 6 hours of laboratory work. 8 points.

Laboratory fee, \$2.50 for each half-year.

Prerequisite: Course 53-54 and some knowledge of chemistry.

Not given in 1909-10.]

153—Anatomy of Vascular Plants. Professor RICHARDS and Miss LATHAM. 2 lectures and a minimum of 6 hours of laboratory work. 5 points.

Tu. and Th. at 9.

Laboratory fee, \$2.50.

Prerequisite: Course 53-54.

154—Physiology of Plants from Standpoint of Nutrition. Professor RICHARDS and Miss LATHAM. 2 lectures and a minimum of 6 hours of laboratory work. 5 points.

Tu. and Th. at 9.

Laboratory fee, \$2.50.

Prerequisite: Course 153 and some knowledge of chemistry.

Courses 154 and 156 are given in alternate second half-years.

[156—Physiology of Plants from Standpoint of Growth. Professor RICHARDS and Miss LATHAM. 2 lectures and a minimum of 6 hours of laboratory work. 5 points.

Laboratory fee, \$2.50.

Prerequisite: Course 153 and some knowledge of chemistry.

Not given in 1909-10.]

Courses 153, 154 and 156 are open to students only after consultation with the instructor.

158—Structure and Development of Algæ. Advanced course. Professor RICHARDS and Dr. HAZEN. 1 lecture and 6 hours of laboratory work. 4 points.

Hours to be arranged.

Laboratory fee, \$2.50.

Prerequisite: Courses 51-52 and 53-54.

159—Structure and Development of Fungi. Advanced course. Professor RICHARDS. 1 lecture and 6 hours of laboratory work. 4 points.

Hours to be arranged.

Laboratory fee, \$2.50.

Prerequisite: Courses 51-52 and 53-54.

Courses 158 and 159 are given either the first or second half-year to suit the convenience of the instructor and students. The two courses will not usually be given the same year.

160—Embryology and Laboratory Methods. Practice in methods of technique, with the study of the embryology of one or more types Professor RICHARDS and Miss LATHAM. 8 hours of laboratory work with occasional lectures and outside reading. 4 points.

Hours to be arranged.

Laboratory fee, \$2.50

Prerequisite: Course 153; parallel: Course 154 or 156.

This course may be given in the first or in the second half-year.

161,162—Advanced Physiology and Morphology. Professor RICHARDS and Dr. HAZEN.

Work will be arranged to suit the needs of the students, and credit will be given according to the amount accomplished. Open to students only after consultation with the instructors.

Laboratory fee, \$2.50 for each half-year.

With the permission of the instructor this course may be taken in successive years.

CHEMISTRY

Students are requested to elect courses in the following order: 5-6, 63, 64, 41-42 43-44.

5-6—General Inorganic Chemistry. Professor REIMER, Miss KELLER, and Miss MACLEOD. 5 hours, including lectures, discussions, and laboratory work. 6 points.

M., W., and F. at 11. Laboratory work, Tu., W., or Th., 2-4.30.
Laboratory fee, \$5.

41-42—Organic Chemistry, Elementary Lecture Course. Professor REIMER. 2 lectures. 4 points.

M. and W. at 1.

Prerequisite: Course 5-6. It is urged that Course 43-44 be taken with this course.

43-44—Organic Chemistry, Elementary Laboratory Course. Professor REIMER. 8 hours. 8 points.

Hours to be arranged.

Laboratory fee, \$20.

Prerequisite: Courses 5-6, 41-42. Recommended as a parallel to Course 41-42.

This course is designed to teach the student the important methods of preparation of organic compounds.

A special laboratory course of 4 hours a week counting as 4 points is offered, after consultation with the instructor.

63—Qualitative Analysis. Miss KELLER. 3 lectures and 8 hours of laboratory work. 7 points.

Tu. and Th. at 11 and a third hour to be arranged.

Laboratory fee, \$6.

Prerequisite: Course 5-6.

64—Quantitative Analysis. Miss KELLER. 3 lectures and 8 hours of laboratory work. 7 points.

Tu. and Th. at 11 and a third hour to be arranged.

Laboratory fee, \$6.

Prerequisite: Courses 5-6 and 63.

The lecture work of Courses 63 and 64 consists of two hours a week devoted to the general chemistry of the subject, and one hour to elementary theoretical chemistry.

105-106—Inorganic Chemistry, Advanced Course. Miss KELLER. 3 lectures and 6 hours of laboratory work. 12 points.

Hours to be arranged.

Laboratory fee, \$20.

Prerequisite: Courses 5-6, 63, 64, and Physics 11-12.

This course is designed to supplement Courses 63 and 64. The lectures will be devoted to a detailed discussion of the elements, including the rare elements, and advanced theoretical chemistry. The laboratory work will consist of practice in preparation of inorganic compounds, mineral analyses, and physical-chemical measurements.

[145-146—Organic Chemistry, Advanced Course. Professor REIMER. 3 lectures and 6 hours of laboratory work. 12 points.

Laboratory fee, \$20.

Prerequisite: Courses 5-6, 41-42, 43-44, 63, 64.

This course is designed to supplement Courses 41-42 and 43-44. It is a more comprehensive discussion of the most important classes of organic compounds and their

relations to each other. Special emphasis will be given to recent theories as to the structure of the compounds and the mechanism of their reactions. The laboratory work consists of the preparation of organic compounds discussed in the lectures and the study of their reactions. In the second half-year, some special problem is assigned to each student.

Not given in 1909-10.]

Journal Club. Professor REIMER and Miss KELLER. 1 hour.

The advanced students and the instructors meet for reports and discussion on recent scientific papers.

ECONOMICS AND SOCIAL SCIENCE

Economics

A1-A2—Outlines of Economics; first half-year. **Practical Economics;** second half-year. Professor MUSSEY and Dr. AGGER. 6 points.

Entire Class Saturday at 10; Section I, M. and W. at 9; Sections II and III, Tu. and Th. at 9; Section IV, Tu. and Th. at 10.

Prescribed for juniors but open to specially qualified sophomores.

During the first half-year this course will consist of a study of the characteristics of modern industrial society and of the fundamental economic principles; during the second half-year it illustrates the application of economic principles to such practical questions as money and banking, the tariff and foreign trade, railroads, monopolies, the labor movement, and socialism.

***104—Commerce and Commercial Policy.** Professor MUSSEY. 2 points.

Tu. and Th. at 11.

Prerequisite Course **A1-A2**

In this course the economic bases of modern commerce, and the significance of commerce, domestic and foreign, in its relation to American industry, will be studied. An analysis will be made of the extent and character of the foreign trade of the United States, and the nature and effect of the commercial policies of the principal commercial nations will be examined.

115—Socialism and Social Reform. Professor CLARK. 4 points.

Tu. and Th. at 1 and a third hour to be arranged.

Prerequisite: Course **A1-A2**.

This course offers a study of socialistic and semi-socialistic theories and movements. Beginning with an exposition of early French Socialism, it gives especial attention to the works of Rodbertus and Marx and concludes with a study of the single tax, agrarian movements, factory laws, and economic undertakings of American cities, states, and the federal government.

116—Labor Problems. Professor SEAGER. 4 points.

Tu. and Th. at 1 and a third hour to be arranged.

Prerequisite: Course **A1-A2**.

Attention in this course is divided about equally between problems connected with labor organizations—collective bargaining, strikes, arbitration, etc.,—and problems whose solution involves legislation—child labor, dangerous trades, the sweating system, immigration, etc. Lectures are supplemented by assigned readings, discussions, and special reports.

Courses 107—Fiscal and Industrial History of the United States—and 108—Railroad Problems—given by Professor SELIGMAN at Columbia University on Tu. and Th. at 3 are open with the consent of the Department of Economics and the Committee on Instruction, to properly qualified seniors. For fuller information students are referred to the Announcement of the Division of History, Economics, and Public Law.

Sociology

11, 12—The Life of the Industrial Family; first half-year. The Standard of Living; second half-year. Professor SIMKHOVITCH. 4 points.

Tu. and Th. at 3.

Prerequisite or parallel: Economics A1–A2.

The first half of this course is descriptive, dealing with the life of the immigrant, his housing, education, health, labor and recreation. The second half consists of a study of the income and expenditure of the Industrial Family.

13, 14—Social Progress in Cities. Professor SIMKHOVITCH. 4 points.

Tu. and Th. at 2.

Prerequisite: Economics A1–A2. Course 11, 12 is also recommended as a prerequisite.

The first half of this course consists of a study of public activity in improving living conditions; the second half, of a study of similar work of private associations.

*** 151–152—Principles of Sociology.** Professor GIDDINGS and Mr. TENNEY. 4 points.

M. and W. at 3.

Prerequisite: Economics A1–A2.

EDUCATION

Education A is prerequisite to all other courses in Education. Education B must be taken parallel with other courses in the senior year.

†A—Educational Psychology. Professors THORNDIKE and NORSWORTHY, Dr. BINGHAM, and Miss WHITLEY. 5 points.

The class will meet together on M. and W. at 1, second half-year; and in sections during the second half-year on M., W., and F. at 2.

Any other section meeting at times stated in the *Teachers College Announcement* may be substituted with the approval of the instructor.

Students who have previously had some work in Education may substitute Course 19–20 for Course A.

†B—History and Principles of Education. Professor MONROE and assistants. 6 points.

M., W., and F. at 10.

A second section for Barnard students on M., W., and F. at 3 will be formed in case the 10 o'clock section is too large.

Students who have a satisfactory knowledge of the field covered by Education B may substitute Course 105 or 108 for Course B.

†19–20—Readings in Educational Psychology. Professor NORSWORTHY. 4 points.

Tu. and Th. at 9.

This course may be substituted for Course A by students who have previously had some work in education.

†21-22—The Psychology of Childhood. Professor NORSWORTHY. 4 points.

Tu. and Th. at 10.

†38—Social Life and the School Curriculum. Professor DEWEY. 2 points.

Tu. and Th. at 5.

†87-88—Personal and Institutional Hygiene, Sanitation. Professor WOOD. 6 points.

M., W., and F. at 11.

†105—Principles of Education. Professor MACVANNEL. 3 points.

M., W., and F. at 10.

This course may be substituted for Course B by students who have a satisfactory knowledge of the field covered in that course.

†108—Educational Sociology. Professor SUZZALLO. 3 points.

M., W. and F. at 10.

This course may be substituted for Course B by students who have a satisfactory knowledge of the field covered in that course.

†121-122—Educational Psychology. Professor THORNDIKE. 4 points.

M. and W. at 11.

†187-188—The Hygiene of Childhood and Adolescence. Professor WOOD. 2 points.

S. at 10.

Open only to seniors.

ENGLISH

A1, A2—English Literature and Composition. Professor BREWSTER, Professor HUBBARD, Professor WEEKS, Mr. TASSIN, Dr. GILDERSLEEVE, Mr. GARDNER, Miss BREWSTER, and Mr. ———. 6 points.

Tu., Th. and S. at 10.

Prescribed for freshmen.

The first term will deal with English Composition, the second with English Literature. Students who enter college at the opening of the second term may take the literature at once and the composition the following fall, or, if circumstances warrant the forming of a separate section, at the same time as the literature.

B1, B2—English Composition. Dr. GILDERSLEEVE, Mr. GARDNER, Miss BREWSTER, and Mr. ———. 6 points.

Tu. and Th. at 9 and a third hour to be arranged.

Prerequisite: Course A1, A2.

Prescribed for sophomores.

1, 2—English Composition. Professor BREWSTER. 8 points.

Tu. and Th. at 11 and a third hour to be arranged.

Prerequisite: Course B1, B2.

Daily and fortnightly themes will be required throughout the year. With the permission of the instructor, this course may be taken in two successive years. Except for very good reasons, the second half-year may not be elected unless the student has passed at least once the work of the first half-year.

7-8—Elocution. Mr. TASSIN. 4 points.

M., W., and F. at 2.

Not open to freshmen.

23-24—Introduction to the Study of English Literature. (Based upon modern writers.) Professor HUBBARD. 4 points.

Section I, W. and F. at 10; Section II, at 11.

Open only to freshmen and sophomores and designed for students intending to specialize in English.

25-26—English Poetry from 1550 through Milton. First term: from 1550 to 1625; second term: from 1625 to 1674. Professor TRENT. 6 points.

M. and W. at 10.

Prerequisite: Course B1, B2, or 23-24.

27-28—English Poetry from Dryden to the Victorian Period. First term: from Dryden to Wordsworth; second term: from Wordsworth to 1830. Professor TRENT. 6 points.

M. and W. at 11.

Prerequisite: Course B1, B2, or 23-24.

29-30—English Literature from the Earliest Period to the Norman Conquest. First term: Anglo-Saxon prose; second term: Beowulf and selected Anglo-Saxon poems. Dr. AYRES. 6 points.

M., W., and F. at 2.

Prerequisite: Course A1, A2.

31, 32—English Literature from the Norman Conquest to 1550. The first term will be devoted chiefly to Chaucer; the second term will include a general survey of romances, ballads, and other important forms of mediæval literature in England and on the Continent. Dr. GILDERSLEEVE. 8 points.

M., W., and F. at 9.

Open to juniors and seniors who have taken at least one elective course in English.

33, 34—English Literature in the Nineteenth Century, after 1830. First term: prose; second term: poetry. Professor HUBBARD. 6 points.

Tu. and Th. at 11 and a third hour to be arranged.

The first term is open to all juniors and seniors; the second term, except by special permission of the instructor, is open only to those who have passed the first term satisfactorily.

35, 36—Shakspeare. Dr. GILDERSLEEVE. 6 points.

M., W., and F. at 11.

Prerequisite: Course B1, B2, or 23-24.

[37-38—English Prose, including Fiction. Professor BREWSTER. 8 points.

Not given in 1909-10.]

41-42—English Drama exclusive of Shakspeare. First term: the drama to the closing of the theatres in 1642; second term: the drama from the closing of the theatres to modern times. Mr. TASSIN. 8 points.

M., W., and F. at 3.

Prerequisite: Courses B1, B2 and 23-24.

†59-60—Typical Forms of Literature. Professors BAKER and SYKES. 4 points.

M. and W. at 2.

With the consent of the Department of English and the Committee on Instruction, certain courses in the Graduate School are open to specially qualified seniors.

FINE ARTS

†53-54—Art Appreciation; History of Art. Professor DOW. 4 points.

Tu., 4-5.30.

French. See Romance Languages and Literatures.

GEOGRAPHY

†1-2—General Geography. Professor DODGE and Miss C. B. KIRCHWEY. Lectures and laboratory work. 6 points.

M. 10-12, W. and F. at 10.

Laboratory fee, \$1.

Open to all undergraduate students.

GEOLOGY

1, 2—General Geology. Elementary course. The time-honored subjects of physical, structural, dynamical, stratigraphical, and historical geology are treated as parts of a single subject, from the point of view, first of processes and their results, later of the history of the earth. Dr. OGILVIE and Dr. MAURY. 2 lectures, 2 hours of laboratory work. 6 points.

Tu. and Th. at 10. Laboratory or field work, W., 1-3 or 2-4 or Tu. 1-3.

1a, 2a—General Geology. Laboratory work supplementary to 1, 2 and to be taken only in connection with Course 1, 2. Dr. OGILVIE. 2 hours of laboratory work. 2 points.

Hours to be arranged.

113—Summer Field Course. Dr. OGILVIE. 2 weeks in the field, involving the subsequent preparation of a report. 4 points.

Time to be arranged.

Prerequisite: Course 1, 2.

117, 118—Glacial Geology and Advanced Physiography. Dr. OGILVIE. Lectures, reading, field and laboratory work.

Work will be arranged to suit the needs of the students and credit will be given according to the amount accomplished. (See also statement under Course 120.)

Prerequisite: Course 1, 2.

119, 120—General Geology. Advanced Course. Dr. OGILVIE. Lectures, reading, field and laboratory work.

Work will be arranged to suit the needs of the students and credit will be given according to the amount accomplished.

Prerequisite to Course 119: Courses 1, 2 with 1a, 2a, and 117. Students who have had Courses 1, 2 and 117 must take 1a, 2a parallel with 119, 120.

Course 120 is open, with the permission of the instructor, to students who have had at least 6 points of work in Course 117 and who wish to do at least 6 points of work in this Course.

Journal Club—The advanced students and instructors in Columbia University meet for 1 hour weekly for the discussion of current papers and problems. The meetings of the Journal Club are open to Barnard students taking Courses 117, 118, 119, 120 and to seniors in 1, 2.

GERMANIC LANGUAGES AND LITERATURES

A1-A2—Elementary Course. Mr. BECHERT, Mr. PORTERFIELD and Dr. HASKELL. 6 points.

Section I, M., W., and F. at 10; Section II at 11; Section III at 2; and Section IV, intended primarily for Teachers College students, at 4.

Prescribed for freshmen who did not present elementary entrance German.

1-2—Intermediate Course. Reading, Grammar, and Composition. Mr. BECHERT, Mr. PORTERFIELD, and Dr. HASKELL. 6 points.

Sections I and II, M., W., and F. at 9; Section III at 1.

Prerequisite to Course 1: Course A1-A2 or elementary entrance German.

Prerequisite to Course 2: Course 1 or intermediate entrance German.

3-4—Composition and Colloquial Practice. Elementary Course. Drill in German syntax and idiom. Mr. BECHERT. 4 points.

Section I, Tu. and Th. at 10; Section II, at 2.

Prerequisite: Course A1-A2, or elementary entrance German. This course may be elected only in combination with Course 1-2, 5-6, or 7, 8.

5-6—Selected Dramas of Lessing, Goethe, and Schiller. Texts and essays. Dr. BRAUN, Mr. BECHERT, and Mr. PORTERFIELD. 6 points.

Section I, M., W., and F. at 9; Sections II and III at 1.

Prerequisite: Course 1-2, or with the consent of the instructor, intermediate entrance German.

7, 8—Historical Prose. Rapid reading of selections from the prose

writings of Lessing, Goethe, Schiller, and of modern German historians, essayists, and critics. Mr. PORTERFIELD. 6 points.

M., W., and F. at 2.

Prerequisite: Course 1-2, or with the consent of the instructor, intermediate entrance German.

9, 10—Intermediate Practice Course. Conversation and themes on German life, literature and current events, all in German. Dr. BRAUN. 4 points.

Tu. and Th. at 2. A second section will be arranged if necessary.

Prerequisite: Course 3-4, or 5-6, or 7, 8.

May be elected only in combination with Course 5-6, 7, 8, 13-14, 17, 18, or 19, 20.

11, 12—Advanced Practice Course. Discussion of syntax, idioms, and synonyms. Talks and themes, all in German, upon linguistic and literary topics. Mr. HEUSER. 4 points.

Tu. and Th. at 2.

Prerequisite: Course 9, 10, or its equivalent.

13-14—Selected Dramas of the Nineteenth Century. Texts of representative dramatists, such as Kleist, Grillparzer, and Ludwig; reports and essays. Dr. BRAUN. 4 points.

Tu. and Th. at 9.

Prerequisite: Course 5-6.

17, 18—History of German Literature from the earliest times to the nineteenth century. Lectures, themes, and readings from Thomas's *Anthology of German Literature*. Dr. BRAUN. 4 points.

M. and W. at 9.

The first term is open to juniors and seniors who have taken Course 5-6 or 7, 8; the second term, except by special permission of the instructor, is open only to those who have passed the first term satisfactorily.

19, 20—Goethe's Faust; First and Second Parts. Lectures and recitations. Professor THOMAS. 4 points.

Tu. and Th. at 11.

The first term is open to juniors and seniors who have taken Course 5-6 or 7, 8; the second term, except by special permission of the instructor, is open only to those who have passed the first term satisfactorily.

Courses 105, Prose Fiction in the Nineteenth Century, Professor THOMAS; 106, Modern German Dramatics, Professor TOMBO; 107, History of the German Language, Professor REMY; 112, Middle High German, Professor REMY; 122, Icelandic, Professor CARPENTER; 129-130, Outlines of the History of German Civilization, Dr. RICHARD, given at Columbia University, are open, with the consent of the Department of Germanic Languages and Literatures and the Committee on Instruction, to properly qualified seniors. For fuller information students are referred to the Announcement of the Division of Modern Languages.

GREEK

(See the note prefixed to the announcement of courses in Latin. Courses 3, 4, 7, 8 are mainly literary, courses 5, 6 mainly linguistic in character. Students seeking to elect courses numbered above 6 should consult the instructor in charge of the course or the head of the department.)

1-2—Elementary Course; Grammar, Composition, Xenophon's Anabasis, Homer's Iliad. Dr. STURTEVANT. 10 points.

M., Tu., W., Th., and F. at 2.

Prerequisite: elementary entrance Latin.

This course may not be begun in the second half-year. It is designed for students who have entered without Greek but wish to include it in their course of study. It is believed that such students will be qualified to enter Course 3 or Course 5 at the beginning of the following year.

3—Homer: The Odyssey (selections). Dr. SHEAR. 2 points.

M. and W. at 10.

Prerequisite: Course 1-2 or elementary entrance Greek. Required as parallel: 2 points of Course 19-20 (F. at 10) or Course 11-12 (M. at 11).¹

4—Euripides: Iphigenia in Tauris and Medea. Dr. SHEAR. 2 points.

M. and W. at 10.

Prerequisite: Course 1-2 or elementary entrance Greek. Required as parallel: 2 points of Course 19-20 (F. at 10) or Course 11-12 (M. at 11).¹

5—Xenophon: Hellenica (selections). Dr. STURTEVANT. 2 points.

W. and F. at 11.

Prerequisite: Course 1-2 or elementary entrance Greek. Required as parallel: Course 11-12 (M. at 11) or 2 points of Course 19-20 (F. at 10).¹

6—Plato: Apology and Crito. Dr. HIRST. 2 points.

W. and F. at 11.

Prerequisite: Course 1-2 or elementary entrance Greek. Required as parallel: Course 11-12 (M. at 11) or 2 points of Course 19-20 (F. at 10).¹

7—Sophocles: Oedipus Tyrannus and Antigone. Professor KNAPP. 3 points.

Tu. and Th. at 10 and a third hour to be arranged.

8—Aristophanes: Acharnians and Birds. Professor KNAPP. 3 points.

Tu. and Th. at 10 and a third hour to be arranged.

9-10 (old number 19-20)—Greek Literature; lectures and required reading. Dr. SHEAR. 6, 8, or 10 points. 2, 3, or 4 sessions weekly.

Tu. and Th. at 2 (other hours to be arranged).

11-12 (old number 17-18)—Elementary Greek Prose Composition. Dr. SHEAR. 2 points.

¹ First-year students may elect at will: Course 3-4 or 5-6; those who have entrance conditions in Greek prose are, however, strongly advised to elect Course 5-6. Students conditioned at entrance in Greek prose *must* elect Course 11-12 as the required parallel to Course 3-4 or 5-6; they *may* also, subject to action by the Committee on Instruction, elect 2 points of Course 19-20. Similarly first-year students who elect 2 points of Course 19-20 as the required parallel to Course 3-4 or 5-6 may also, subject to action by the Committee on Instruction, elect Course 11-12.

M. at 11.

Required as a parallel to Course 5, 6 unless Course 19-20 is elected instead.

This course may be elected by second-, third-, or fourth-year students who have not previously counted any course in Greek composition toward the degree.

13-14 (old number **23-24**)—**Advanced Greek Prose Composition.** Dr. HIRST. 2 or 4 points.

Th. at 9.

With the permission of the head of the department, this course may be taken in successive years.

19-20 (old number **25-26**)—**Greek Life and Thought;** lectures and readings. Dr. SHEAR. 4 points (or, 2 points if taken as required parallel to Course 3-4 or 5-6).

F. at 10.

As a 2-point course this is required as a parallel to Course 3-4 unless Course 11-12 is elected instead. As a 4-point course it may be elected by students other than first-year students who are taking any other course in the Department. Such students will be required to do much more work than will be expected of first-year students who take it in combination with Course 3-4.

HISTORY

A1-A2—**Epochs of Ancient, Mediæval, and Modern History** with special reference to forms of government and changes in social conditions. Professor SHOTWELL and Miss HUTTMANN. 6 points.

Entire class, W. at 3. Section I, Tu. and Th. at 11; Section II, Tu. and Th. at 1; Section III (intended primarily for freshmen), Tu. and Th. at 2.

Prescribed for sophomores, but may be taken as an elective by freshmen.

This course is prerequisite to all the courses enumerated below.

Students who pass the entrance examinations in ancient, mediæval, and modern history will be allowed to take a special examination on the same periods based on the requirements of History A1-A2. If they satisfy this test, they will be permitted to substitute for History A1-A2, as the prescribed work, any course in history numbered less than 100, provided that the total number of points of credit attached to the course be not less than six.

[3-4—Greece and Early Rome. Professor BOTSFORD. 6 points.

Not given in 1909-10.]

Courses 3-4 and 5-6 are given in alternate years.

5-6—The Roman Empire. Mr. HUTH. 6 points.

M., W., and F. at 10.

9, 10—Continental European History, modern and contemporaneous. Professor SHOTWELL and Miss POINTS. 8 points.

M., W., and F. at 2, and a fourth hour to be arranged.

[11-12—Modern English History. Professor BEARD. 6 points.

Not given in 1909-10.]

13-14—History of the United States to the Close of Reconstruction. Professor SHEPHERD. 6 points.

M., W., and F. at 11.

†151-52—Literature of American History. Professor JOHNSON. 4 points.

Tu. and Th. at 3.

121, 122—History of the Intellectual Class in Europe from the Greek Sophists to the French Philosophers of the 18th Century. Professor ROBINSON and Miss HUTTMANN. 8 points.

Tu. and Th. at 3, and a third hour to be arranged.

Courses 157-158, the History of England during the Eighteenth and Nineteenth Centuries, Professor OSGOOD, and 161-162, Political and Constitutional History of the United States, Professor SHEPHERD, given at Columbia University and open to properly qualified seniors, are not offered in 1909-10.

LATIN

For the first two years certain courses (B1, B2, 3, 4) will be mainly but not wholly linguistic; certain other courses (A1, A2, 1, 2) will be mainly literary in character. The linguistic courses are intended specially for those who purpose to teach Latin; such students should also give all possible time to the courses in prose composition. The literary courses are intended for those who study Latin in the interests of general culture rather than for professional reasons. Those who purpose to be teachers cannot, however, afford wholly to neglect the literary courses, nor, on the other hand, can those whose interests are mainly literary secure the best results without careful linguistic study.

Accordingly, that all students may be able to make use of the advantages offered in Greek and Latin, they will be allowed at the beginning of the later years, with the consent of the head of the department, to elect courses of the earlier years (A1, A2, B1, B2, 1, 2, 3, 4) not yet counted toward a degree. In all such cases the student will be required to do some extra work prescribed by the instructor in charge of the course. The attention of advanced students is called to the courses in Greek and Roman life. Students planning to elect Courses 9-10, 17-18, 19-20, should consult the head of the department.

A1—Vergil: Eclogues; Ovid (selections). Professor KNAPP and Dr. SHEAR. 2 points.

Sections I and II, Th. and S. at 9.

Prescribed as parallel: 2 points of Course 19-20 (Tu. at 9) or Course 11-12 (M. at 1).¹

Prescribed for freshmen taking the A.B. course, unless they elect Course B or have offered Advanced Latin at entrance.

A2—Horace: Odes (selections). Professor KNAPP and Dr. SHEAR. 2 points.

Sections I and II, Th. and S. at 9.

Prerequisite: Course A1. Prescribed as parallel: 2 points of Course 19-20 (Tu. at 9) or Course 11-12 (M. at 1).¹

Prescribed for freshmen as above.

B1—Cicero: De Senectute and De Amicitia. Professor KNAPP and Dr. STURTEVANT. 2 points.

Sections I and II, W. and F. at 1.

¹ See footnote on p. 75.

Prescribed as parallel: Course **11-12** (M. at 1) or 2 points of Course **19-20** (Tu. at 9).¹

Prescribed for freshmen taking the A.B. course, unless they elect Course **A** or have offered Advanced Latin at entrance.

B2—Livy (selections from Books XXI, XXII). Professor KNAPP and Dr. STURTEVANT. 2 points

Sections I and II, W. and F. at 1.

Prerequisite Course **B1**. Prescribed as parallel: Course **11-12** (M. at 1) or 2 points of Course **19-20** (Tu. at 9).¹

1—Catullus. Dr. HIRST. 2 points.

Tu. and Th. at 11.

2—Juvenal. Dr. STURTEVANT. 2 points.

Tu. and Th. at 11

3—Seneca: Tragedies. Dr. STURTEVANT. 3 points.

M., W., and F. at 10.

4—Tacitus: Dialogus; Agricola. Dr. HIRST. 3 points.

M., W., and F. at 10.

5—Cicero: Tusculan Disputations. Dr. HIRST. 3 points.

M., W., and F. at 9.

9-10—Latin Literature; lectures and required reading. Professor KNAPP. 6, 8, or 10 points. 2, 3, or 4 sessions weekly.

Tu. and Th. at 3 (other hours to be arranged).

11-12—Elementary Latin Prose Composition. First Course. Professor KNAPP. 2 points.

M. at 1.

Prescribed as a parallel to Course **B1-B2** unless Course **19-20** is elected instead.

This course is to first-year students only.

13-14—Elementary Latin Prose Composition. Second Course. Professor KNAPP. 2 points.

M. at 2.

This course may be elected by second-, third-, or fourth-year students who have not previously counted any course in Latin composition toward the degree.

15-16—Intermediate Latin Prose Composition. Dr. HIRST. 2 points.

Th. at 3.

17-18—Advanced Latin Prose Composition. Dr. HIRST. 4 points.

Th. at 10.

19-20. Roman Life and Thought; lectures and readings. Professor

¹ First-year students may elect at will Course **A1-A2** or **B1-B2**; those who have entrance conditions in Latin Prose Composition are, however, strongly advised to elect **B1-B2**. Students conditioned at entrance in Latin prose *must* elect Course **11-12** as the required parallel to Course **B1-B2** or **A1-A2**; they *may* also, subject to action by the Committee on Instruction, elect 2 points of Course **19-20**. Similarly, first-year students who elect 2 points of Course **19-20** as the required parallel to Course **A1-A2** or **B1-B2** may, subject to action by the Committee on Instruction, elect Course **11-12**.

KNAPP. 4 points (or 2 points, if taken in combination with Course A1-A2 or B1-B2).

Tu. at 9.

As a 2-point course, this is prescribed as a parallel to Course A1-A2 unless Course 11-12 is elected instead. As a 4-point course it may be elected by students other than first-year students who are taking any other course in the department. Such students will be required to do much more work than will be expected of first-year students, who are taking it in combination with Course A1-A2.

†51-52—Latin Readings. Professor LODGE. 6 points.

M., W., and F. at 10.

MATHEMATICS

A1, A2—Geometry; Algebra and Trigonometry. Solid geometry; algebra, including permutations and combinations, determinants, and logarithms; trigonometry, including the use of tables, the solution of triangles, and the important analytical formulæ. Professor KASNER and Mr. KRATHWOHL. 6 points.

Sections I and II, M. W., and F. at 9; Section III, M., W., and F. at 10; Section IV, Tu., Th., and S. at 9.

Prescribed for freshmen who did not present advanced mathematics at entrance.

21—Analytical Geometry. Introduction to the analytical geometry of the plane and of space. Professor KASNER. 3 points.

M., W., and F. at 10.

Prerequisite: Course A1, A2 or advanced entrance mathematics.

22—Calculus. Elementary course in the differential and integral calculus. Professor KASNER. 3 points.

M., W., and F. at 10.

Prerequisite: Course 21.

23-24—Theory of Equations. Algebraic and numerical solution of equations, determinants, complex numbers. Mr. KRATHWOHL. 6 points.

M., W., and F. at 2.

Prerequisite: Course A1, A2.

25, 26—Calculus. Differential and integral calculus. Professor COLE. Course 25, 2 points; Course 26, 4 points.

M., W., and F. at 11.

Prerequisite: Course 22.

27-28—Projective Geometry. Projective methods of pure geometry. Mr. KRATHWOHL. 6 points.

M., W., and F. at 1.

Prerequisite: Course 21.

[31-32—Advanced Analytical Geometry. Modern methods in analytical geometry; solid analytical geometry. Mr. KRATHWOHL. 6 points.

Prerequisite or parallel: Course 25, 26.

Not given in 1909-10.]

[33-34—**The Fundamental Concepts of Modern Mathematics.** Lectures, discussions, and reports. Professor KASNER. 6 points.

Prerequisite: Course 25, 26.

Not given in 1909-10.]

35-36—**General Introduction to Higher Mathematics.** Professor KASNER. 6 points.

M., W., and F. at 11.

Prerequisite: Course 25, 26.

[45-46—**Theoretical Mechanics.** Professor KASNER. 6 points.

Prerequisite or parallel: Mathematics 25, 26.

Not given in 1909-10.]

†53-54—**Applied Mathematics.** Mr. UPTON. 6 points.

M., W., and F. at 3.

†151-152—**History of Mathematics.** Professor D. E. SMITH. 4 points.

Tu. and Th. at 3.

MUSIC

For fuller information regarding the various courses in music students are referred to the Announcement of the Faculty of Fine Arts.

*1-2—**General Musical Course.** History and appreciation of music, with illustrations. Professor McWHOOD. 6 points.

M., W., and F. at 10.

This course requires no previous knowledge of music.

*3-4—**General Musical Course, advanced.** Discussion of modern music. Professor RUBNER. 4 points.

W. and F. at 9.

Prerequisite: Course 1-2.

*7-8—**Harmony.** Professor McWHOOD. 6 points.

M., W., and F. at 11.

Prerequisite: a knowledge of musical notation.

*9-10—**Advanced Harmony and Practical Composition.** Professor McWHOOD. 4 points.

W. and F. at 1.

Prerequisite: Course 7-8.

*11-12—**Counterpoint.** Professor McWHOOD. 4 points.

W. and F. at 2.

Prerequisite: Course 7-8.

*13-14—**Composition and Orchestration.** Professor RUBNER. 4 points.

Th. 10-12.

Prerequisite: Course 9-10.

Course 101-102, Advanced Composition, Orchestration, and Symphonic Form, Professor RUBNER, given at Columbia University is open, with the consent of the Department of Music and the Committee on Instruction, to properly qualified seniors.

PHILOSOPHY AND PSYCHOLOGY

Philosophy

A1, A2—Introductory Course. Psychology, Course A1; Logic, Course A2. Professor MONTAGUE, Dr. BROWN, and Mr. WOODROW. 6 points.

During the first half-year, Sections I-IV will study psychology, and Section V, logic; during the second half-year, Sections I-IV will study logic and Section V, psychology.

Sections I and II, M., W., and F. at 9; Sections III and IV at 10, Section V at 11.

Prescribed for sophomores.

1—Metaphysics. Professor MONTAGUE. 4 points.

M., W., and F. at 2.

Prerequisite or parallel: Course 61-62.

21-22—Ethics. Professor LORD. 8 points.

Tu., Th., and S. at 9.

Prerequisite: Course A1, A2.

61-62—The History of Philosophy. First half-year, Professor WOODBRIDGE; second half-year, Professor MONTAGUE. 8 points.

M., W., and F. at 9.

Prerequisite: Course A1, A2.

80—Introduction to Contemporary Philosophy. Dr. BROWN. 4 points.

M., W., and F. at 2.

Prerequisite or parallel: Course 61-62.

Courses 131, 132, Moral and Political Philosophy, Professor DEWEY; 127-128, Modern Ethical Ideals, Professor MILLER; 169-170, The Philosophy of Plato and Aristotle, Professor WOODBRIDGE and Dr. BUSH, given at Columbia University, are open, with the consent of the Department of Philosophy and the Committee on Instruction, to properly qualified seniors. For fuller information students are referred to the Announcement of the Division of Philosophy, Psychology and Anthropology.

Psychology

For the elementary course in psychology which is prerequisite to all other courses in this subject, see Philosophy A1.

7-8—Experimental Psychology, Introductory Course. Mr. WOODROW. 2 lectures and 2 or 4 hours of laboratory work, counting as 6 or 8 points.

Tu. and Th. at 2; laboratory work M. and W. or Tu. and Th. afternoons.

9-10—Experimental Psychology, Intermediate Course. Mr. WOODROW. Conference and laboratory work. 8 points.

M., Tu., W., and Th. afternoons.

Courses at Columbia University numbered over 100 in analytic, experimental, physiological, pathological and genetic psychology, given by Professors CATTELL, STRONG, WOODWORTH, and THORNDIKE, are open to specially qualified seniors with the consent

of the Department and the Committee on Instruction. For details of these courses see the Announcement of the Division of Philosophy, Psychology, and Anthropology.

PHYSICAL EDUCATION

†A1, A2—Lectures on personal hygiene, elementary graded exercises, games and dancing. Miss CALHOUN. 2 hours. 2 points.

Section I, M. and W. at 3; Section II at 4.

Prescribed for freshmen.

Gymnasium fee, \$7.

†B1, B2—Lectures on personal hygiene, graded gymnastic exercises, games and dancing. Miss CALHOUN. 2 hours. 2 points.

Section I, Tu. and Th. at 3; Section II at 4.

Gymnasium fee, \$7.

Prescribed for sophomores.

†C1-C2—National, folk and æsthetic dancing. Miss CALHOUN. 2 hours.

Tu. and Th. at 2. (Hours subject to change.)

Gymnasium fee, \$7

Open to juniors and seniors.

This course cannot be counted for a degree.

NOTE—An annual gymnasium fee of \$7 is required of all students in Barnard College. This entitles the student to a locker and the use of the gymnasium, swimming-pool, hand-ball courts, and bowling alleys at scheduled hours.

For detailed description of other courses in Hygiene and Physical Education, offered by the Faculty of Teachers College, and open to Barnard College students, see the Announcement of the Division of Physical Education.

PHYSICS

11-12—General Physics. Mechanics, heat, and sound, first half-year; Magnetism, electricity, and light, second half-year. Miss LANGFORD. 5 hours, lectures, discussions, and laboratory work. 6 points.

M., W., and F. at 11.

31 (Old number 131)—Mechanics and the Properties of Matter. Mr. CLARK. 3 hours lectures and discussions, and 2 or 4 hours of laboratory work. 4 or 5 points.

Hours to be arranged.

Prerequisite: Course 11-12.

32 (Old number 134)—Heat. Mr. CLARK. 3 hours lectures and discussions, and 2 or 4 hours of laboratory work. 4 or 5 points.

Hours to be arranged.

Prerequisite: Course 31.

[33 (Old number 132)—Light. 4 or 5 points.

Prerequisite: Course 11-12.

Not given in 1909-10.]

[34 (Old number 135)—**Sound**. Professor MALTBY. 4 or 5 points.
Prerequisite: Courses 31 and 32.

Not given in 1909-10.]

35 (Old number 137)—**Electricity and Magnetism**. Mr. KENDALL.
3 hours lectures and discussions, and 2 or 4 hours of laboratory work.
4 or 5 points.

Hours to be arranged.

Prerequisite: Courses 31 and 32.

136 (Old number 138)—**Electricity**. Mr. KENDALL. 4 hours, lectures and discussions. 4 points.

Hours to be arranged.

Prerequisite: Courses 31, 32, and 35.

[145-146—**Physical Chemistry**. Professor MALTBY. 8, 10 or 12 points.

Prerequisite: Courses in general physics, chemistry—organic and inorganic—and the elements of calculus. As a minor for candidates for the degrees of A.M. and Ph.D.; or with a thesis as a major for the degree of A.M.

Not given in 1909-10.]

(For **Theoretical Mechanics**, see Mathematics 45-46.)

ROMANCE LANGUAGES AND LITERATURES

French

A1, A2—Elementary Course. Mr. MULLER and Dr. GERIG. 6 points.
M., W., and F., Sections I and II at 10; Section III, intended primarily for Teachers College students, at 3.

Prescribed for students who did not present French at entrance.

B1, B2—Reading, Composition, Syntax. Dr. FITZ-GERALD and Mr. MULLER. 6 points.

M., W., and F. at 11.

Prerequisite to Course **B1**: Course **A1, A2**, or elementary entrance French.

Prerequisite to Course **B2**: Course **B1**, or intermediate entrance French.

1, 2—General Introduction to the Study of French Literature. Reading, composition, and lectures. Professor PAGE, Mr. MULLER, and Dr. GERIG. 6 or 8 points.

M., W., and F., Section I at 10, Section II at 2; also for students entering on intermediate French, and for others who in the judgment of the instructor may need it, Tu. at 2.

Prerequisite: for the 8-point course, intermediate entrance French, Course **B1** or its equivalent; for the 6-point course, Course **B2**, or advanced entrance French.

3, 4—Modern French Writers, Especially the Historians. Compositions and class work entirely in French. Mr. ———. 6 points.

M., W., and F. at 1.

Prerequisite: Course 1, 2 or the equivalent of Course B2, with special training in the practical use of the language.

Students taking any of the following electives are strongly advised to take Course 11, 12 at the same time.

5, 6—History of French Literature in the Seventeenth Century. Professor PAGE. 6 points.

M., W., and F. at 11.

Prerequisite: grade C in Course 1, 2, or Course 3, 4.

11, 12—Advanced Composition and Conversation. Mr. MULLER. 2 points.

Th. at 2.

Prerequisite, Course 1, 2.

This course may be taken only in combination with another elective course in French.

Courses 103, 104, History of French Literature in the Eighteenth Century, Mr. ———; 105, 106, History of French Literature in the Nineteenth Century, Professor PAGE; 111, 112, French Literature in the Sixteenth Century, Professor LOISEAUX; 113, 114, Old French, Professor TODD, given at Columbia University, are open, with the consent of the Department of Romance Languages and Literatures and the Committee on Instruction, to properly qualified seniors. For fuller information students are referred to the Announcement of the Division of Modern Languages.

Italian

1, 2—Elementary Course. Grammar, reading, composition. Dr. GERIG. 6 points.

M., W., and F. at 1.

This course may not be taken at the same time with Spanish 1, 2.

3, 4—General Introduction to the Study of Italian Literature. Professor SPERANZA. 6 points.

M., W., and F. at 1.

Prerequisite: Course 1, 2.

Courses 131, Italian Literature of the Fourteenth Century, exclusive of the *Divina Commedia*, 132, Italian Literature of the Fifteenth Century, 137, 138, Critical Study of Dante's *Divina Commedia*, all by Professor SPERANZA, given at Columbia University, are open, with the consent of the Department of Romance Languages and Literatures and the Committee on Instruction, to properly qualified seniors. For fuller information students are referred to the Announcement of the Division of Modern Languages.

Spanish

1, 2—Elementary Course. Grammar, reading, composition. Professor LOISEAUX. 6 points.

M., W., and F. at 11.

This course may not be taken at the same time with Italian 1, 2.

3, 4—General Introduction to Spanish Literature. Grammar, reading, composition. Dr. FITZ-GERALD. 6 points.

M., W., and F. at 10.

Prerequisite: Course 1, 2.

11—Spanish Conversation. 1 hour. Professor LOISEAUX.

Hour to be arranged.

May be omitted in 1909-10.

This course cannot be counted for a degree.

Courses 141, 142, *The Novela of the Golden Age*, Dr. FITZ-GERALD, given at Columbia University, are open, with the consent of the Department of Romance Languages and Literatures and the Committee on Instruction, to properly qualified seniors. For fuller information students are referred to the Announcement of the Division of Modern Languages.

Romance Philology

Courses 151, 152, *Introduction to Romance Philology, Phonology* (first half-year), *Morphology* (second half-year), Professor TODD, are open under the same conditions to properly qualified seniors.

Sociology. See **Economics and Social Science**

ZOOLOGY

1-2—General Biology and General Zoölogy. Elementary course. Professor CRAMPTON, Dr. OSBURN, Miss REED, and Miss DEDERER. 2 lectures and 4 hours of laboratory work. 8 points.

Tu. and Th. at 1. Laboratory work, Tu. and Th., or W. and F., 2-4.

Laboratory fee, \$5.

Open to sophomores, juniors, and seniors; especially designed for students of physiology, geology, and medicine, as well as for those who intend to pursue zoölogy and botany.

3—Histology. Dr. OSBURN. 1 lecture and 2 hours of laboratory work. 2 points.

W. at 9.

Laboratory fee, \$2.50, unless taken with Course 1.

Prerequisite or parallel: Course 1. Recommended as a parallel to Course 1.

4—Embryology. Dr. OSBURN. 1 lecture and 2 hours of laboratory work. 2 points.

W. at 9.

Laboratory fee, \$2.50, unless taken with Course 2 or Course 102.

Prerequisite or parallel: Course 1-2. Recommended as a parallel to Course 2.

[5—General Biology. The general principles of biology, variation, inheritance, evolution, geographical distribution, animal coloration, and related topics. Professor CRAMPTON. 2 points.

Laboratory fee, \$1.25.

Prerequisite: Course 1-2.

This course supplements the general discussions given in Courses 1-2 and 101-102 and gives opportunity for a more critical and extended treatment of general principles.

Not given in 1909-10.]

[6—Experimental Biology. An introduction to the experimental

study of growth, reactions to stimuli, development, inheritance, and related topics. Professor CRAMPTON. 2 points.

Laboratory fee, \$1.25.

Prerequisite: Course 1-2.

This course gives opportunity to undergraduates to become familiar with some of the methods and results of experimental research, and forms a desirable preparation for graduate work in experimental subjects.

Not given in 1909-10].

101-102—General Zoölogy. Advanced course. Dr. OSBURN, Miss REED, and Miss DEDERER. 3 lectures and 6 hours of laboratory work. 12 points.

M., W., and F., 9-12.

Laboratory fee, \$5.

Prerequisite: Courses 1-2 and 4.

This course is designed for students intending to enter medicine, also for students of zoölogy and botany, as graduate subjects.

151-152—General Physiology. General principles of animal physiology. Miss REED. 2 lectures, and 4 hours of demonstration and laboratory work. 8 points.

Tu. and Th., 9-12.

Laboratory fee, \$5.

Open to juniors and seniors.

This course is designed for students of zoölogy, botany, and psychology, as well as for students intending to study medicine, and may be taken together with, or subsequent to, Course 1-2.

153, 154—Practical Zoölogy and Embryology. Miss DEDERER. 3 hours of conference and laboratory work. 4 points.

Hours to be arranged

Laboratory fee, \$5.

Prerequisite: Course 1-2.

This course is designed for students of zoölogy desiring practice in the preparation and mounting of zoölogical, histological, and embryological materials for microscopic examination.

SCHEME OF

HOURS	MONDAY	TUESDAY	WEDNESDAY
A.M. 9	*Architecture 23-24 Botany 51-52 Economics A1-A2 (I) English 31, 32 German 1-2 (I, II) German 5-6 (I) German 17, 18 Latin 5 Mathematics A1, A2 (I, II) Philosophy A1, A2 (I, II) Philosophy 61-62 Zoology 101-102	*Architecture 23-24 Botany 153, 154 Economics A1-A2 (II, III) †Education 19-20 English B1, B2 German 13-14 Latin 19-20 Mathematics A1, A2 (IV) Philosophy 21-22 Zoology 151-152	Botany 51-52 Economics A1-A2 (I) English 31, 32 German 1-2 (I, II) German 5-6 (I) German 17, 18 Latin 5 Mathematics A1, A2 (I, II) *Music 3-4 Philosophy A1, A2 (I, II) Philosophy 61-62 Zoology 3, 4 Zoology 101-102
10	†Education B †Education 105, 108 English 25-26 French A1, A2 (I, II) French 1, 2 (I) †Geography 1-2 German A1-A2 (I) Greek 3, 4 History 5-6 Latin 3, 4 †Latin 51-52 Mathematics A1, A2 (III) Mathematics 21, 22 *Music 1-2 Philosophy A1, A2 (III, IV) Spanish 3, 4 Zoology 101-102	*Architecture 21-22 Economics A1-A2 (IV) †Education 21-22 English A1, A2 Geology 1, 2 German 3-4 (I) Greek 7, 8 Zoology 151-152	†Education B †Education 105, 108 English 23-24 (I) English 25-26 French A1, A2 (I, II) French 1, 2 (I) †Geography 1-2 German A1-A2 (I) Greek 3, 4 History 5-6 Latin 3, 4 †Latin 51-52 Mathematics A1, A2 (III) Mathematics 21, 22 *Music 1-2 Philosophy A1, A2 (III, IV) Spanish 3, 4 Zoology 101-102
11	*Architecture 25-26 Chemistry 5-6 †Education 87-88 †Education 121-122 English 27-28 English 35, 36 French B1, B2 French 5, 6 †Geography 1-2 German A1-A2 (II) Greek 11-12 History 13-14 Mathematics 25, 26 Mathematics 35-36 *Music 7-8 Philosophy A2, A1 (V) Physics 11-12 Spanish 1, 2 Zoology 101-102	*Architecture 25-26 *Astronomy 1, 2 Botany 53-54 Chemistry 63, 64 *Economics 104 English 1, 2 English 33, 34 German 19, 20 History A1-A2 (I) Latin 1, 2 Zoology 151-152	Chemistry 5-6 †Education 87-88 †Education 121-122 English 23-24 (II) English 27-28 English 35, 36 French B1, B2 French 5, 6 German A1-A2 (II) Greek 5, 6 History 13-14 Mathematics 25, 26 Mathematics 35-36 *Music 7-8 Philosophy A2, A1 (V) Physics 11-12 Spanish 1, 2 Zoology 101-102

Courses marked with an asterisk [*] are given at Columbia University

ATTENDANCE

THURSDAY	FRIDAY	SATURDAY
*Architecture 23-24 Botany 153, 154 Economics A ₁ -A ₂ (II, III) †Education 19-20 English B ₁ , B ₂ German 13-14 Greek 13-14 Latin A ₁ -A ₂ (I, II) Mathematics A ₁ , A ₂ (IV) Philosophy 21-22 Zoölogy 151-152	*Architecture 23-24 Botany 51-52 English 31, 32 German 1-2 (I, II) German 5-6 (I) Latin 5 Mathematics A ₁ , A ₂ (I, II) *Music 3-4 Philosophy A ₁ , A ₂ (I, II) Philosophy 61-62 Zoölogy 101-102	Latin A ₁ -A ₂ (I, II) Mathematics A ₁ , A ₂ (IV) Philosophy 21-22
*Architecture 21-22 Economics A ₁ -A ₂ (IV) †Education 21-22 English A ₁ , A ₂ Geology 1, 2 German 3-4 (I) Greek 7, 8 Latin 17-18 *Music 13-14 Zoölogy 151-152	†Education B †Education 105, 108 English 23-24 (I) French A ₁ , A ₂ (I, II) French 1, 2 (I) †Geography 1-2 German A ₁ -A ₂ (I) Greek 19-20 History 5-6 Latin 3, 4 †Latin 51-52 Mathematics A ₁ , A ₂ (III) Mathematics 21, 22 *Music 1-2 Philosophy A ₁ , A ₂ (III, IV) Spanish 3, 4 Zoölogy 101-102	Economics A ₁ -A ₂ (I-IV) †Education 187-188 English A ₁ , A ₂
*Architecture 25-26 *Astronomy 1, 2 Botany 53-54 Chemistry 63, 64 *Economics 104 English 1, 2 English 33, 34 German 19, 20 History A ₁ -A ₂ (I) Latin 1, 2 *Music 13-14 Zoölogy 151-152	*Architecture 25-26 Chemistry 5-6 †Education 87-88 English 23-24 (II) English 35, 36 French B ₁ , B ₂ French 5, 6 German A ₁ -A ₂ (II) Greek 5, 6 History 13-14 Mathematics 25, 26 Mathematics 35-36 *Music 7-8 Philosophy A ₂ , A ₁ (V) Physics 11-12 Spanish 1, 2 Zoölogy 101-102	

those marked with a dagger [†] are given at Teachers College.

SCHEME OF

HOURS	MONDAY	TUESDAY	WEDNESDAY
P.M. I.10	Anthropology 1, 2 Chemistry 41-42 †Education A French 3, 4 German 1-2 (III) German 5-6 (II, III) Italian 1, 2 Italian 3, 4 Latin 11-12 Mathematics 27-28	Economics 115, 116 History A1-A2 (II) Zoölogy 1-2	Anthropology 1, 2 Chemistry 41-42 †Education A French 3, 4 German 1-2 (III) German 5-6 (II, III) Italian 1, 2 Italian 3, 4 Latin B1-B2 (I, II) Mathematics 27-28 *Music 9-10
2.10	†Education A English 7-8 English 29-30 †English 59-60 French 1, 2 (II) German A1-A2 (III) German 7, 8 Greek 1-2 History 9, 10 Latin 13-14 Mathematics 23-24 Philosophy 1, 80	French 1, 2 (Composition) German 3-4 (II) German 9, 10 German 11, 12 Greek 1-2 Greek 9-10 History A1-A2 (III) Psychology 7-8 Sociology 13, 14	†Education A English 7-8 English 29-30 †English 59-60 French 1, 2 (II) German A1-A2 (III) German 7, 8 Greek 1-2 History 9, 10 Mathematics 23-24 *Music 11-12 Philosophy 1, 80
3.10	Botany 55-56 English 41-42 French A1, A2 (III) †Mathematics 53-54 †Physical Education A1, A2 (I) *Sociology 151-152	†History 51-52 History 121, 122 Latin 9-10 †Mathematics 151-152 †Physical Education B1, B2 (I) Sociology 11, 12	English 41-42 French A1, A2 (III) History A1-A2 (I-III) †Mathematics 53-54 †Physical Education A1, A2 (I) *Sociology 151-152
4.10	German A1-A2 (IV) †Physical Education A1, A2 (II)	†Fine Arts 53-54 †Physical Education B1, B2 (II)	German A1-A2 (IV) †Physical Education A1, A2 (II)
5.10		†Education 38 †Fine Arts 53-54 (5-5.30)	

Courses marked with an asterisk [*] are given at Columbia University;

ATTENDANCE—Continued

THURSDAY	FRIDAY	SATURDAY
Economics 115, 116 History A1-A2 (II) Zoology 1-2	Anthropology 1, 2 French 3, 4 German 1-2 (III) German 5-6 (II, III) Italian 1, 2 Italian 3, 4 Latin B1-B2 (I, II) Mathematics 27-28 *Music 9-10	
French 11, 12 German 3-4 (II) German 9, 10 German 11, 12 Greek 1-2 Greek 9-10 History A1-A2 (III) Psychology 7-8 Sociology 13, 14	†Education A English 7-8 English 29-30 French 1, 2 (II) German A1-A2 (III) German 7, 8 Greek 1-2 History 9, 10 Mathematics 23-24 *Music 11-12 Philosophy 1, 80	
†History 51-52 History 121, 122 Latin 9-10 Latin 15-16 †Mathematics 151-152 †Physical Education B1, B2 (I) Sociology 11, 12	English 41-42 French A1, A2 (III) †Mathematics 53-54	
†Physical Education B1, B2 (II)	German A1-A2 (IV)	
†Education 38		

those marked with a dagger [†] are given at Teachers College.

ACADEMIC CALENDAR

1909-1910

- 1909—Sept. 6—Monday, Last day for filing applications for entrance and delinquent examinations in September.
- Sept. 13—Monday, Entrance examinations and examinations for deficient and debarred students begin.
- Sept. 15—Wednesday, Registration begins.
- Sept. 21—Tuesday, Registration ceases for students previously matriculated. Later applications received only upon payment of an additional fee of \$5.
- Sept. 22—Wednesday, First half-year, 20th year, begins.
Registration ceases for students matriculating for the first time. Later applications received only upon payment of an additional fee of \$5.
- Nov. 2—Tuesday, Election Day, holiday.
- Nov. 25—Thursday,
to
Nov. 27—Saturday, inclusive, Thanksgiving holidays.
- Dec. 22—Wednesday,
to
1910—Jan. 5—Wednesday, inclusive, Christmas holidays.
- Jan. 3—Monday, Last day for filing applications for mid-year entrance examinations.
- Jan. 10—Monday, Mid-year entrance examinations begin.
- Jan. 26—Wednesday, Mid-year examinations begin.
- Feb. 5—Saturday, First half-year ends.
- Feb. 7—Monday, Second half-year begins.
Registration ceases for students entering the second half-year. Later applications received only upon payment of an additional fee of \$5.
- Feb. 22—Tuesday, Washington's Birthday, holiday.
- Mar. 24—Thursday,
to
Mar. 28—Monday, inclusive, Easter holidays.
- April 1—Friday, Last day for filing applications for scholarships.
- May 16—Monday, Final examinations begin.
- May 27—Friday, Class Day.
- May 29—Sunday, Baccalaureate service.
- May 30—Monday, Memorial Day.

- June 1—Wednesday, Commencement Day.
- June 8—Wednesday, second half-year ends.
- June 13—Monday, Examinations of the College Entrance Examination Board begin. The dates for filing applications are contained in a circular issued by the Board, Post-office Sub-station 84, New York, N. Y.
- Sept. 12—Monday, Last day for filing applications for entrance or delinquent examinations in September.
- Sept. 19—Monday, Entrance examinations and examinations for deficient and debarred students begin.
- Sept. 21—Wednesday, Registration begins.
- Sept. 27—Tuesday, Registration ceases for students previously matriculated. Later applications received only upon payment of an additional fee of \$5.
- Sept. 28—Wednesday, First half-year, 21st year, begins.
Registration ceases for students matriculating for the first time. Later applications received only upon payment of an additional fee of \$5.

